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**Datasheet for the decision
of 11 February 2020**

Case Number: T 0247/17 - 3.3.03

Application Number: 03815251.8

Publication Number: 1578865

IPC: C08L31/00

Language of the proceedings: EN

Title of invention:
POLYMERIZABLE COMPOSITE MATERIAL

Patent Proprietor:
PULPDENT CORPORATION

Opponents:
3M Deutschland GmbH
3M Innovative Properties Co.

Relevant legal provisions:
RPBA Art. 12(4)
EPC Art. 54, 123(2)

Keyword:

Admittance of documents (yes)

Novelty - Main Request (no)

Amendments - First and second auxiliary requests - extension
beyond the content of the application as originally filed
(yes)

Decisions cited:

T 0731/11



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Case Number: T 0247/17 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 11 February 2020

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Decision under appeal:

**Decision of the Opposition Division of the
European Patent Office posted on 14 November
2016 revoking European patent No. 1578865
pursuant to Article 101(2) EPC.**

Composition of the Board:

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

Summary of Facts and Submissions

- I. The appeal by the patent proprietor lies from the decision of the opposition division posted on 14 November 2016 revoking European patent No. 1 578 865.

Claims 1 to 4 of the application as originally filed that are relevant to the present decision read as follows:

"1. A polymerizable composite material comprising:
at least one multifunctional acid containing monomer having a concentration ranging from about 10% to about 85% by weight;
a non-reactive filler having a concentration ranging from about 1% to about 80% by weight;
a polymerization system having a concentration ranging from about 1.5% to about 15% by weight; and
water having a concentration ranging from about 0.1% to about 25% by weight."

"2. The polymerizable composite material of claim 1 wherein the multifunctional acidic monomer is bis-2(methacryloxy)ethyl phosphate."

"3. The polymerizable composite material of claim 1 further comprising a non-acid co-monomer having a concentration ranging from about 5% to about 80% by weight."

"4. The polymerizable composite material of claim 4 wherein the non-acid co-monomer is diurethane dimethacrylate."

II. The patent as granted contained two claims reading as follows:

"1. A polymerizable composite material useful in restorative dental applications comprising:
at least one multifunctional acidic monomer having a concentration ranging from 10% to 85% by weight;
a nonacid co-monomer having a concentration ranging from 5% to 80% by weight;
a non-reactive filler having a concentration ranging from 1% to 80% by weight;
a polymerization system having a concentration ranging from 1.5% to 15% by weight; and
water having a concentration ranging from 0.1% to 25% by weight."

"2. A method of making a polymerizable composite material useful in restorative dental applications comprising:
providing at least one multifunctional acidic monomer having a concentration ranging from 10% to 85% by weight;
and a nonacid co-monomer having a concentration ranging from 5% to 80% by weight;
adding a non-reactive filler having a concentration ranging from 1% to 80% by weight;
adding a polymerization system having a concentration ranging from 1.5% to 15% by weight; and
adding water having a concentration ranging from 0.1 % to 25 % by weight."

III. A notice of opposition against the patent was filed in which revocation of the patent was requested.

IV. The decision of the opposition division to revoke the patent for lack of novelty of claims 1 and 2 of the

patent as granted (main request) in view of D1 (EP 1 066 813) was announced at the oral proceedings on 2 November 2016.

In the contested decision, the opposition division *inter alia* held that:

- D1 concerned restorative dental applications in the sense defining claim 1 of the main request. Also, the composition of comparative example 12 of D1 contained 4-acryloxyethyltrimellitic acid (4-AET) which was a multifunctional acidic monomer according to claim 1 of the main request since the term "multifunctional" was not limited to functional groups undergoing a polymerization reaction. Claim 1 of the main request lacked novelty over D1. Claim 2 of the main request lacked novelty over D1 for the same reasons as claim 1.

V. The patent proprietor (appellant) lodged an appeal against that decision and filed with the statement of grounds of appeal two sets of claims as first and second auxiliary requests. Also, it was requested to admit the following documents into the proceedings:

D14: Wikipedia article of the term "Carothers equation" dated 1 March 2017

D15: Bland et al., *Biomaterials* 17 (1996), pages 1109-1114

D16: Schneider et al., *Operative Dentistry*, 2006, 31-4, pages 489-495

D17: Park et al., *Dent. Mater.* 2009, December 25 (12): pages 1569-1575

D18: Swiderska et al., *Polish Journal of Chemical Technology*, 2013, 15(2): pages 81-85

D19: Shalaby et al., *Polymers for Dental and Orthopedic*

Applications, Shalaby and Salz, eds., CRC Press New York NY 2007, pages 112 and 113

Claims 1 and 2 of the first auxiliary request corresponded to claims 1 and 2 of the main request wherein the multifunctional acidic monomer was bis-2(methacryloxy)ethyl phosphate.

Claims 1 and 2 of the second auxiliary request corresponded to claims 1 and 2 of the main request wherein the multifunctional acidic monomer was bis-2(methacryloxy)ethyl phosphate and wherein the nonacid co-monomer was diurethane dimethacrylate.

- VI. The rejoinder to the statement of grounds of appeal was filed by the opponents (respondents).
- VII. Oral proceedings were held on 11 February 2020 in the presence of both parties.
- VIII. The appellant's arguments, insofar as relevant to the decision, may be summarised as follows:

Admittance of documents D14-D19

- D14-D19 addressed the conclusion of the opposition division that 4-AET disclosed in the composition of comparative example 12 of D1 was a multifunctional acidic monomer in the sense of claim 1 of the main request. While it was correct that the interpretation of the term "multifunctional acidic monomer" had been raised at the beginning of the opposition procedure, the summons to oral proceedings of the opposition division indicated that 4-AET was not considered as being a multifunctional acidic monomer by the opposition

division. D14-D19 were filed in reply to the change of interpretation of the term "multifunctional acidic monomer" taken by the opposition division as apparent from their decision. These documents were thus not filed late.

- Even though D14 and D16-D19 were published after the priority date of the patent in suit, D14-D19 as a whole showed that in the art of restorative dental applications the term "multifunctional" had consistently been used to describe polymerizable groups. D14-D19 should thus be admitted into the proceedings.

Main request - Novelty

- The term "multifunctional" in claim 1 of the main request had to be given its normal meaning, which in the context of a monomer was that the monomer was multifunctional towards polymerization, namely that the monomer contained more than one functional group participating in a subsequent polymerization reaction. That interpretation was supported by documents D14-D19 and the patent itself which all showed a use of the term "multifunctional" confined to the polymerizable groups of a monomer. The patent in suit also made it clear that the multifunctional acidic monomers were used to strengthen a resin network formed after polymerization, which implied that the monomer had to contain multiple polymerization groups.
- The monomer 4-AET contained in the composition according to comparative example 12 of D1 contained two acidic groups and one ethylenically unsaturated group. The term "multifunctional" did not cover the

acidic groups of that monomer which therefore was monofunctional.

- While the composition according to comparative example 12 of D1 referred to a dental adhesive composition, the use made thereof in the example corresponded to that of a regular adhesive and could not be seen as falling under the term "restorative dental application".
- Claim 1 of the main request was therefore novel over comparative example 12 of D1.

First and second auxiliary requests - Amendments

- Claim 1 of the first auxiliary request was based on claims 1 and 2 and paragraphs 6, 29 and 31 of the application as originally filed. The examples also supported the limitation of claim 1 to bis-2(methacryloxy) ethyl phosphate as multifunctional acidic monomer. Paragraph 29 of the application as originally filed provided support for the presence of 5-80% by weight of co-monomer in the compositions according to claim 1. It was also clear that paragraph 29 concerned "non-acidic" co-monomers even though that was not explicitly specified in that paragraph. Reference to the use in restorative dental applications was made in paragraphs 8 and 11 of the application as originally filed. The same arguments applied to claim 2 which concerned the method of providing the composition of claim 1. Claims 1 and 2 of the first auxiliary request therefore found a basis in the application as originally filed.

- Claims 1 and 2 of the second auxiliary request were further based on claim 4 and paragraphs 18 and 31 of the application as originally filed. Otherwise, the same arguments as those submitted for the first auxiliary request applied to the second auxiliary request. Claims 1 and 2 of the second auxiliary request therefore found a basis in the application as originally filed.

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

Admittance of documents D14-D19

- Documents D14-D19 addressed an issue that had already been raised early in the opposition proceedings. Therefore, these documents should have been filed earlier in the first instance proceedings. Furthermore, D14-D19 did not represent the common general knowledge at the priority date of the application as originally filed. D14-D19 should thus not be admitted into the proceedings.

Main request - Novelty

- Claim 1 of the main request lacked novelty over comparative example 12 of D1. The composition of that example contained 4-AET as a monomer. That component was both multifunctional and acidic and as such was according to claim 1 of the main request. There was in particular no reason to limit the meaning of the term "multifunctional" in claim 1 of the main request to polymerizable groups only. Also, the composition according to comparative example 12 of D1 was useful in restorative dental applications in the sense of claim 1 of the main

request since D1 disclosed adhesive compositions that were used in the field of restorative dentistry. That interpretation was also in accordance with the definition of restorative dental applications in the patent in suit.

First and second auxiliary requests - Amendments

- The question of whether the combination of features defining claim 1 of the then pending main request met the requirements of Article 123(2) EPC had already been answered in the negative by the Board in their decision T 731/11 of 29 June 2012. That decision, which concerned the present case, was binding for the Board.
- Irrespectively, claim 1 of the first auxiliary request did not find a basis in the application as originally filed. In particular, that claim was defined by a combination of features, namely the presence of a non-acid co-monomer having a concentration ranging from about 5% to about 80% by weight and the use of bis-2(methacryloxy)ethyl phosphate as multifunctional acidic monomer, that found no basis in dependent claims 2 and 3 of the application as originally filed because these claims did not depend on one another.
- The description as filed did also not disclose that combination of features. There was no basis for the combination of different parts of the description relating either to the presence of a co-monomer in the composition or to the use of bis-2(methacryloxy)ethyl phosphate. Also, the generalization of the examples of the patent in suit did not form an adequate basis for claim 1 of

the first auxiliary request. The same arguments applied to the second auxiliary request.

- X. The appellant requested that the decision under appeal be set aside and the case be remitted to the opposition division for the analysis of inventive step on the basis of the claims of the patent as granted (main request), or on the basis of the claims of one of the first or second auxiliary requests, filed with the statement of grounds of appeal. It was further requested that documents D14 to D19 be admitted into the proceedings.
- XI. The respondents requested that the appeal be dismissed and that documents D14 to D19 not be admitted into the proceedings.

Reasons for the Decision

1. Admittance of documents D14-D19
- 1.1 Article 12(4) RPBA 2007 applies to a statement of grounds of appeal filed before the entry into force of the RPBA 2020 (Article 25(2) RPBA 2020), and thus also to any document filed therewith.
- 1.2 Documents D14 to D19 were filed with the statement of grounds of appeal. The common denominator to these documents is that they relate to the polymerization of monomers containing more than one polymerizable group. These monomers are referred to as multifunctional monomers in D14-D19.
- 1.3 The appellant argued that documents D14-D19 were filed to address the reasoning of the opposition division under point 2.11 of the contested decision in which it

was concluded that the term "multifunctional acidic monomer" in the sense of claim 1 of the main request covered the monomer 4-AET disclosed in the composition of comparative example 12 of D1, even if that monomer contained only one polymerizable group.

- 1.4 Documents D14-D19 all concern multifunctional monomers for which a description is provided by way of a definition (D14), or by way of molecular formulas (D15-D19). The information contained in these documents appears to address point 2.11 of the contested decision. D14-D15 thus can be seen as having been filed in reply to the decision of the opposition division.
- 1.5 Since D14 to D19 were filed with the statement of grounds of appeal, the documents were filed in accordance with Article 12(3) RPBA 2020. The respondent however argued that these documents could and should have been filed earlier during the opposition proceedings since the issue discussed under point 2.11 of the decision of the opposition division had already been raised and discussed between the parties during the opposition proceedings.
- 1.6 While the interpretation of the term "multifunctional acidic monomer" was indeed an issue raised since the beginning of the opposition procedure, the summons to oral proceedings of the opposition division made it explicit that, at that time, the monomer 4-AET was not considered to be a multifunctional acidic monomer on the grounds that it was known in the field of polymers that the term multifunctional in claim 1 of the main request only referred to the polymerizable portion of the monomer (Annex to the summons of 7 October 2015, page 3, third paragraph).

1.7 The opposition division thus had indicated that they intended to side with the patent proprietor on that point in the summons to oral proceedings. Consequently there was at this stage no necessity for the patent proprietor to provide further evidence regarding that question. The reversal of the opinion of the opposition division in the contested decision could not have been reasonably expected by the patent proprietor prior to the oral proceedings. This justifies, in the opinion of the Board, the filing of further evidence in that regard at the beginning of the appeal proceedings.

1.8 With regard to the publication date of D14 and D16-D19, it is not because that date falls after the priority date of the patent in suit that these documents necessarily cannot be used to establish the content of the common general knowledge at the priority date of the patent in suit. It is thus not a factor of relevance in the admittance of these documents in the present case.

1.9 Under these circumstances the Board does not make use of its power under Article 12(4) RPBA 2007 to hold D14-D19 inadmissible.

2. Main request - Novelty

2.1 The opposition division concluded that the claims of the main request lacked novelty over D1 because the composition disclosed in comparative example 12 of that document was seen as being useful in restorative dental applications in the sense of the patent in suit and the monomer 4-AET disclosed in that composition was seen as a multifunctional acidic monomer according to claims 1 and 2 of the main request.

2.2 The appellant contested that conclusion and argued first that the composition according to comparative example 12 of D1 was an adhesive composition that would not be useful in restorative dental applications. However, paragraph 62 of D1 discloses that the compositions reported in Table 3, to which the composition of comparative example 12 belongs, were used as dental adhesive compositions. The adhesive properties disclosed in Table 4 for the composition of comparative example 12 also show that that composition could be used as a dental adhesive even if its properties were in some respect inferior to those of inventive compositions according to D1. These inferior properties alone however do not mean that the adhesive according to comparative example 12 could not have been useful in restorative dental applications.

2.3 Paragraph 9 of D1 further defines a dental adhesive as a material relating to an adhesive restoration employed clinically in a dental surgery and mentions, among other applications, a dental bonding agent, a dental adhesive resin cement, a dental fissure sealant and a root canal filling material, all of which can be seen as relating to a material used to replace or assist in replacing missing tooth structure, as defined in paragraph 2 of the patent in suit. Contrary to the argument of the appellant, the distinction made in paragraph 2 of the patent in suit between dental adhesives and restorative materials does not exclude the compositions according to D1, which are dental adhesives, from being useful in restorative dental applications. It is in particular apparent from paragraph 2 of the patent in suit that both compositions and materials may be used jointly in dental restoration.

2.4 Accordingly, a dental adhesive can be seen as being useful in restorative dental applications in the sense of claims 1 and 2 of the main request. The Board concludes therefrom that the dental adhesives disclosed as such in paragraph 62 and Table 3 of D1, which include the composition according to comparative example 12, are useful in restorative dental applications.

2.5 The appellant also considered that claim 1 of the main request differed from the composition of comparative example 12 of D1 in that the monomer 4-AET present in the composition of comparative example 12 was not a multifunctional acidic monomer in the sense of claim 1 of the main request.

2.5.1 As not disputed by the appellant, 4-AET is a monomer known in the prior art to contain two carboxylic acid groups and one ethylenically unsaturated group. That monomer therefore contains three functional groups of two different kinds. 4-AET is therefore in both respects a multifunctional monomer. The appellant however submitted that the term "multifunctional acidic monomer" in claim 1 of the main request required the monomer to contain multiple groups that participated in a polymerization reaction. That was not the case of 4-AET since that monomer contained only one polymerizable group in the form of the unsaturated ethylenic polymerizable group.

2.5.2 The term "multifunctional acidic monomer" in claims 1 and 2 of the main request is however ambiguous. The adjective "multifunctional" in that term can refer to the number of polymerizable groups contained in the monomer and it can also refer to the overall number of functional groups of the monomer, irrespective of

whether these groups are polymerizable groups or not. Both interpretations are technically reasonable in the context of claims 1 and 2 of the main request in particular because the compositions disclosed therein would in both cases still be polymerizable composite materials useful in restorative dental applications.

2.5.3 The multifunctional acidic monomer is also not defined any further in claims 1 or 2 of the main request, nor in the description, so that the ambiguity regarding its definition is not resolved in the patent in suit. The appellant further argued that the multifunctional acidic monomer had to contain multiple polymerizable groups to form a polymer network. There is however no mention of a polymer network in claims 1 or 2 of the main request and the only occurrence of a network in the description concerns the co-monomer (paragraph 14) and mentions an acid integrating resin network only. There is thus no indication in the patent in suit that the formation of a network required the multifunctional acidic monomer to contain multiple polymerizable groups.

2.5.4 Under these circumstances, it is standard practice of the Boards of appeal to give to a term that may contain an ambiguity its broadest technically sensible meaning. In the present case, it means that multifunctional may refer to any part present on the monomer, including its acidic portion.

2.5.5 The appellant cited the passages in paragraphs 4 and 11 of the description of the patent in suit and documents D14-D19 in order to establish that a "multifunctional acidic monomer" would be understood as a monomer comprising multiple polymerizable groups. However, neither the patent in suit nor D14-D19 indicate that a

multifunctional acidic monomer would necessarily refer to a monomer having multiple polymerizable groups.

- 2.5.6 In particular, the passages in paragraphs 4 and 11 of the patent in suit cited by the appellant refer to an acidic monomer but they do not explicitly address the definition of the term "multifunctional" as used in claims 1 and 2. Furthermore, it is doubtful whether these passages actually make a meaningful distinction between a "multifunctional acidic monomer" and an "acidic monomer" since in paragraph 11, the two terms are used interchangeably.
- 2.5.7 As to D14-D19, these documents refer to multifunctional monomers as monomers bearing multiple polymerizable groups, from which the appellant concluded that the term "multifunctional acidic monomer" in claims 1 and 2 of the main request implied a monomer containing multiple polymerizable groups as well. D14-D19 however only show that within the specific context of these documents, a multifunctional monomer was defined as to a monomer having multiple polymerizable groups. That however does not change the fact that in the context of claims 1 and 2 of the main request the "multifunctional acidic monomer", because of its ambiguity, can still be seen as referring to monomers containing several acid groups and one polymerizable group, as is the case for 4-AET. D14-D19 do not show that that interpretation would be excluded by the skilled reader of the main request.
- 2.5.8 Under these circumstances, the Board comes to the conclusion that (4-AET) can be seen as a multifunctional acidic monomer in the sense of claims 1 and 2 of the main request.

2.5.9 It is concluded from the above that the composition according to comparative example 12 of D1 can be seen as useful in restorative dental applications and it contains a multifunctional acidic monomer. Since it was not disputed that the composition of comparative example 12 otherwise fell under the definition in claims 1 and 2 of the main request, it can only be concluded that claims 1 and 2 of the main request lack novelty over D1.

3. First and second auxiliary requests - Amendments

3.1 Claims 1 and 2 of the first auxiliary request are among other features defined by the combination of a nonacid co-monomer having a concentration ranging from 5% to 80% by weight with the use of bis-2(methacryloxy)ethyl phosphate as the multifunctional acidic monomer in the polymerizable composite material.

3.2 In decision T 731/11 of 29 June 2012 pertaining to an appeal lodged in the examination phase of the application underlying the present case, the Board in a different composition concluded that the claims of the then main request did not meet the requirements of Article 123(2) EPC on the grounds that a polymerizable composite material including the same combination of a nonacid co-monomer having a concentration ranging from 5% to 80% by weight and the use of bis-2(methacryloxy)ethyl phosphate as the multifunctional acidic monomer did not find a basis in the application as originally filed (points 2.1.2 to 2.1.5 of the decision). The respondent argued during the oral proceedings before the present Board that decision T 731/11 taken during the examination phase was also binding in the opposition phase (including opposition appeal proceedings) with respect to the

decision to be taken under Article 123(2) EPC concerning the first auxiliary request.

- 3.3 However, in accordance with consistent case law, opposition proceedings are separate and distinct from examination proceedings such that a decision by a board of appeal on an appeal against a decision from an examining division is not binding in subsequent opposition proceedings or on appeals therefrom, having regard both to the EPC and to the principle of *res judicata* (Case Law of the Boards of Appeal, 9th Edition, July 2019, V.A.8.3). In the present case that means that the decision T 731/11 taken in the examination phase is not binding for the present Board.
- 3.4 It must therefore still be assessed whether the requirements of Article 123(2) EPC with regard to the present first auxiliary request filed during opposition appeal proceedings are met or not, irrespective of the decision reached by the Board in case T 731/11 on that issue.
- 3.5 Claims 1 and 14 of the application as originally filed which constitute the starting point for claims 1 and 2 of the first auxiliary request respectively do not contain the features relating to the presence of a nonacid co-monomer having a concentration ranging on 5% to 80% by weight and to the use of bis-2(methacryloxy)ethyl phosphate as the multifunctional acidic monomer in the polymerizable composite material.
- 3.6 Both features are however separately defined in claims 2 and 3 of the application as originally filed whereby these claims only depend on claim 1 and do not depend from one another. Claims 2 and 3 therefore do not

provide an adequate basis for the combination of these features.

3.7 The appellant additionally referred to paragraphs 6, 8, 11, 29 and 31 of the application as originally filed as passages forming a basis for the combination of features defining claims 1 and 2 of the first auxiliary request.

3.7.1 Paragraph 6 of the application as originally filed however is a passage corresponding to claim 1 that does not disclose the features added in combination in claim 1 of the first auxiliary request either. That passage therefore does not provide any additional basis for claims 1 and 2 of that request.

3.7.2 Paragraphs 8 and 11 of the application as originally filed relate to the properties of the claimed compositions used in restorative dental applications. Paragraph 11 indicates that these compositions may contain co-monomers but that passage does not define the co-monomers any further and neither paragraph 11 nor paragraph 8 discloses a combination of a non-acidic co-monomer with bis-2(methacryloxy)ethyl phosphate. These two paragraphs therefore do not constitute a valid basis for claims 1 and 2 of the first auxiliary request.

3.7.3 Paragraph 29 of the application as originally filed concerns the amount of co-monomer present in the composition. That co-monomer is also addressed in paragraphs 14, 15, 18 and 25 of the application as originally filed. None of these paragraphs however relates to a nonacid co-monomer as defined in claim 1 of the first auxiliary request. The appellant argued that paragraph 29 was implicitly referring to a nonacid

co-monomer. There is however no reason to assume that the co-monomer addressed in paragraph 29 is non acidic as the co-monomer described in the application as originally filed as a whole is not particularly limited (paragraph 18). In that respect, paragraphs 18 and 29 of the application as originally filed disclose that the co-monomer further strengthens the material through co-polymerization, that however was not shown to mean that the co-monomer was necessarily non acidic. Furthermore, neither paragraph 29 nor any of the paragraphs 14, 15, 18 and 25 relating to the co-monomer disclose or hint at a combination of a co-monomer in the amounts defined in claims 1 and 2 of the first auxiliary request with bis-2(methacryloxy)ethyl phosphate as acidic monomer.

- 3.7.4 Paragraph 31 concerns the examples of the application as originally filed which all describe the preparation of polymerizable composite materials containing bis-2(methacryloxy)ethyl phosphate as multifunctional acidic monomer. There is however in that paragraph no reference to the presence of the nonacid co-monomer having a concentration ranging from 5% to 80% by weight in the composition as defined in claims 1 and 2 of the first auxiliary request. While examples 1, 2, 4, 5, 7, 8, 10A and 10B, 11, 12 and 13 of the application as originally filed all disclose compositions comprising bis-2(methacryloxy)ethyl phosphate as multifunctional acidic monomer in combination with diurethane dimethacrylate, trimethylol propane trimethacrylate and in some instances also hydroxyethylmethacrylate as co-monomers in amounts falling in the range of 5% to 80% by weight, these examples are limited to a small number of specific co-monomers and are defined by specific catalyst systems based on camphorquinone or acylphosphine oxide in amounts that are more limited

than the definition used in claims 1 and 2 of the first auxiliary request. It cannot be inferred from these examples that the specific combinations of components shown therein form a valid basis for the combination of bis-2(methacryloxy)ethyl phosphate as multifunctional acidic monomer with any nonacid co-monomer having a concentration ranging from 5% to 80% by weight as defined in claims 1 and 2 of the first auxiliary request.

- 3.8 Under these circumstances, the Board comes to the conclusion that claims 1 and 2 of the first auxiliary request do not meet the requirements of Article 123(2) EPC.
- 3.9 Claims 1 and 2 of the second auxiliary request correspond to claims 1 and 2 of the first auxiliary request respectively, whereby both claims are further limited to diurethane dimethacrylate as co-monomer. The question that has to be answered with respect to these claims is if there is a basis in the application as originally filed for the combination of 10% to 85% by weight of bis-2(methacryloxy)ethyl phosphate as multifunctional acidic monomer with 5% to 80% by weight of diurethane dimethacrylate as nonacid co-monomer.
- 3.10 With regard to the basis for claims 1 and 2 of the second auxiliary request both parties relied on their submissions regarding the basis of claims 1 and 2 of the first auxiliary request.
- 3.11 The appellant additionally submitted that the use of diurethane dimethacrylate as nonacid co-monomer found a basis in claim 4 of the application as originally filed. Claim 4 indeed defines the non-acid co-monomer as diurethane dimethacrylate. That claim however was

not dependent on claim 2 so that the claims as originally filed do not disclose the combination of bis-2(methacryloxy)ethyl phosphate as multifunctional acidic monomer and diurethane dimethacrylate as non-acid co-monomer that now defines claims 1 and 2 of the second auxiliary request.

- 3.12 The use of diurethane dimethacrylate as non-acid co-monomer is also disclosed in paragraphs 18 and 31 of the application as originally filed. Paragraph 18 however only concerns the definition of possible co-monomers present in the composition. That passage does not disclose or hint at any particular combination of multifunctional acidic monomer and co-monomer in the polymerizable composite material. As to paragraph 31, it indeed discloses the combination of bis-2(methacryloxy)ethyl phosphate and diurethane dimethacrylate in polymerizable composite materials. That disclosure however is made in the context of the examples of the application as originally filed which in addition to the above mentioned combination of monomer and co-monomer further contain several other specific components all in specific amounts as shown in Table 1. The amended subject matter of claims 1 and 2 of the second auxiliary request defined by the combination of bis-2(methacryloxy)ethyl phosphate and diurethane dimethacrylate amounts therefore to a generalisation of the specific examples of the application as originally filed but it is still more specific than the subject matter defined in the claims of the application as originally filed. Claims 1 and 2 of the second auxiliary request thus do not find a basis in the original claims, nor in the examples described in paragraph 31 and in Table 1.

3.13 Under these circumstances, the Board comes to the conclusion that claims 1 and 2 of the second auxiliary request do not meet the requirements of Article 123(2) EPC.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



B. ter Heijden

D. Semino

Decision electronically authenticated