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Datasheet for the decision of 10 September 2020

Case Number: T 1013/17 - 3.3.03

Application Number: 07806259.3

Publication Number: 2065456

IPC: C08L23/28, C08L23/02, C08L23/08, C08L101/00

Language of the proceedings: EN

Title of invention:
RESIN COMPOSITION FOR DAMPING MATERIAL AND DAMPING MATERIAL

Patent Proprietor:
Koatsu Gas Kogyo Co., Ltd.

Opponent:
Henkel AG & Co. KGaA

Relevant legal provisions:
EPC Art. 54, 56, 123(2)
RPBA Art. 12(4), 13(1), 13(3)

Keyword:
Novelty - (yes)
Inventive step - (yes)
Amendments - added subject-matter (no)
Late submitted material - document admitted (no)- D18, D19, D20, D21 - document admitted (yes) D16, D17

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Case Number: T 1013/17 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 10 September 2020

Appellant: (Opponent)	Henkel AG & Co. KGaA Henkelstrasse 67 40589 Düsseldorf (DE)
Representative:	Henkel AG & Co. KGaA CLI Patents Z01 40191 Düsseldorf (DE)
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Representative:	Vossius & Partner Patentanwälte Rechtsanwälte mbB Siebertstrasse 3 81675 München (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 27 February 2017 concerning maintenance of the European Patent No. 2065456 in amended form.**

Composition of the Board:

Chairman	D. Semino
Members:	M. C. Gordon
	W. Ungler

Summary of Facts and Submissions

I. The appeal of the opponent lies against the interlocutory decision of the opposition division posted on 27 February 2017 according to which it was held that European Patent number 2 065 456 could be maintained in amended form on the basis of the claims of the first auxiliary request, filed with letter of 8 December 2016 and an adapted description.

II. The patent was granted with a set of 10 claims, whereby claim 1 read as follows:

"A resin composition for vibration damping material comprising:

100 parts by weight of a resin component A as a matrix and

5-300 parts by weight of a resin component B dispersed in the matrix

wherein the resin component B has two or more cyclic structures selected from the group consisting of an aromatic hydrocarbon group, an aliphatic cyclic hydrocarbon group, and a heteroaromatic group and is in a glassy state at use temperature

wherein the resin component B has a number average molecular weight of 400 to 8000, and

wherein, in a case where the use temperature is in the range of -10 to 50°C, the glass transition temperature of the resin component B is in the range 50-180°C, in a case where the use temperature is in the range of 20 to 80°C, the glass transition temperature of the resin component B is in the range of 80 to 200°C, and in a case where the use temperature is in the range of 50 to 100°C, the

glass transition temperature of the resin component B is in the range of 150 to 200°C".

Claims 2-6 were dependent on claim 1. Claim 7 was directed to vibration damping materials obtained by moulding a composition defined as in claim 1, and claims 8-10 were dependent thereon.

III. A notice of opposition was filed against the patent, invoking the grounds pursuant to Article 100(a) EPC (lack of novelty, lack of inventive step) and Article 100(b) EPC.

The following documents, *inter alia* were cited in the course of the opposition proceedings:
D1: EP-A-1 413 603
D2: WO-A-03/054103
D7: WO-A-96/16134

IV. The decision was based on the the patent as granted as main request and on the first auxiliary request as defined above.

Claim 1 of the first auxiliary request differed from claim 1 of the main request by addition of the following wording at the end of claim 1:
", wherein the resin component B is a copolymer containing at least one monomer having a polycyclic compound in a main chain or a side chain thereof".

As a consequence, claim 2 was deleted.

Claim 6 corresponded to claim 7 of the patent as granted with the same amendment as noted for claim 1, and correspondingly as a consequence, claim 8 as

granted was deleted.

V. According to the decision:

(a) D7 was admitted to the proceedings. This had been filed in response to amendments made by the patent proprietor and was *prima facie* relevant. A datasheet, submitted at the oral proceedings relating to the product "Escorez 5340" disclosed in D7 was not admitted.

(b) The main request met the requirements of sufficiency of disclosure, but lacked novelty. The details of these findings are not relevant for the present decision.

(c) Regarding the auxiliary request - which is the present main request - the following was decided:

- Added subject-matter

  The subject-matter was based on combinations of features found in the claims and the description. Deletion of one alternative did not result in extension beyond the content of the application as filed.

- Novelty

  The requirement that polycyclic structures be present conferred novelty with respect to D1;

- Inventive step

  The subject-matter claimed differed from closest prior art D1, example 21, by the feature that

component B was a copolymer containing at least one monomer component having a polycyclic component in a main chain or a side chain thereof.

There was no evidence of any effect associated with this feature over the whole scope of the claim.

Thus the objective problem was the provision of an alternative resin composition for vibration damping material.

The claimed solution was however not rendered obvious by the cited documents.

VI. The opponent (appellant) filed an appeal against the decision, maintaining objections in respect of added subject-matter, lack of novelty and lack of inventive step.

The following documents were submitted with the statement of grounds of appeal:

D16: Datasheet relating to the Escorez 5300 series;
D17: WO-A-02/00806
D18: Sperling, L.H, Fay, J.J, "Factors Which Affect the Glass transition and Damping Capability of Polymers", Polymers for Advanced Technologies, Vol. 2, pp 49-56, John Wiley and Sons, Ltd, 1991;
D19: Qin, Chuan-Li, *et al*, "Damping properties and morphology of polyurethane/vinylester resin interpenetrating polymer network", Materials Chemistry and Physics, 85 (2004), 402-409

The objection of insufficiency of disclosure was not pursued.

VII. In response the patent proprietor (respondent) maintained the set of claims as upheld by the opposition division as the main request. Four auxiliary requests which are not relevant for the present decision were filed with the rejoinder to the statement of grounds of appeal.

VIII. The Board issued a summons to oral proceedings and a communication setting out its preliminary position on the case.

IX. By communication of 9 September 2020 the Board refused the appellant's request for postponement of the oral proceedings.

X. On 9 September 2020 the appellant announced that it would not be represented at the oral proceedings.

Two further documents:

D20: EP-A-399 792
D21: WO-A-2019/199839

were submitted.

A new objection in respect of inventive step relying on D7 as the closest prior art was advanced.

XI. Oral proceedings were held before the Board on 10 September 2020. As announced, the appellant did not attend.

XII. The arguments of the appellant can be summarised as follows:

(a) Admittance of documents

D16 and D17 had been filed in reaction to the findings of the opposition division to provide evidence of the disclosure of D7.

D18 and D19 had been cited in reaction to the decision of the opposition division and served to provide evidence of the knowledge of the skilled person relating to the use of polymers as vibration- and sound damping materials.

D20 and D21 had been submitted in order to address matters raised in the communication of the Board in respect of D7 and D16/D17.

(b) Added subject-matter

The application as originally filed disclosed polycyclic and monocyclic compounds as alternatives of equivalent rank. Hence the restriction to polycyclic compounds constituted a selection.

The restriction of resin component B to a particular molecular weight range and the definition of the glass transition temperature thereof constituted further selections.
Even accepting, as noted by the opposition division in section 14.1 of the decision, that the various features were individually disclosed in the application as originally filed, the specific combination thereof now claimed was neither explicitly disclosed nor derivable from the

structure of the claims.

(c) Novelty

As stated in the decision, the feature of the claim relating to the relationship between use temperature and glass transition temperature could not serve as a distinguishing feature compared to the state of the art.

Regarding the feature "polycyclic compound", paragraph 28 of the originally filed description stated that this component could also include monocyclic compounds. Thus a monomer with two monocyclic structures would comply with this feature.

Furthermore a polymer derived from monomers with two monocyclic structural units would be indistinguishable from a polymer derived from monomers with a single monocyclic structure, insofar as the proportions of monomers were not specified. Also the condensation product of two monocyclic monomers during polymerisation could in turn be regarded as a (polycyclic) monomer.

D1 disclosed a vibration absorbing composition in which a vibration absorbing agent on the basis of a polyvinyl phenol-based resin was dispersed in a matrix of organic polymer. The vibration absorbing composition of example 21 contained 30 parts of 4-vinylphenol-styrene copolymer (MW 5000) dispersed in 100 parts of an acrylic polymer matrix. This composition thus anticipated the subject-matter of claim 1.

D2 related to an adhesive resin with high damping properties consisting of a first organic polymer and a second resin with Tg above 100°C. According to claims 7, 9 and 10 the second resin could contain 10-25 wt.-% of a phenolic resin which could contain a plurality of different phenolic structures and exhibited a molecular weight of 300-1000. The residue Y of the phenolic resin I could be aryl, phenol or phenylalkyl in which cases a polycyclic compound would be present. The organic polymer was preferably present in the form of an aqueous emulsion/suspension into which the solid resin was mixed. Following drying this necessarily yielded the required heterogeneous structure.

D7 disclosed adhesives for vibration damping constructions consisting of an acrylic matrix resin with a tackifier dispersed therein. Examples 13 and 14 employed the tackifier Escorez 5340 which according to D16, D17, D20 and D21 was a dicyclopentadiene based resin of molecular weight 400 and Tg 89°C. Regarding the possibility of variations in the constitution of Escorez 5340 over time, as raised by the respondent, D20 and D21 confirmed that the relevant properties thereof had remained constant over the period 1989-2019, which encompassed the priority date of D7.
D7 further stated that the resulting blend showed a marked phase separation, i.e. a heterogenous structure with the consequence that D7 also anticipated the claimed subject-matter.

(d) Inventive step

Insofar as the subject-matter was to be regarded as novel, the requirements of inventive step were not

satisfied, reliance being placed on documents D1, D2, D7, D18 and D19.

In this connection the skilled person would have sought in D2 and D7 heterogenous systems in order to provide compositions which provided good damping properties over a broad temperature range. Thus either of D2 or D7 were suitable as the closest state of the art.

Although D7 related to adhesives, these could in particular be used in vibration damping structure since the adhesive itself exhibited vibration damping properties. D7 disclosed that the compositions were particularly suitable for use as vibration suppressors in vehicles, meaning that D7 related to the same technical field as the patent in suit.

Regarding the findings of the opposition division with respect to D1, which relied on the premise that D1 did not relate to polymers of polycyclic monomer units, reference was made to the submissions made in respect of the non-distinction between polymers prepared from monomers having two monocyclic structures and polymers prepared from monomers having a single monocyclic structure. No technical effect was associated with the defined polymers. Thus the claims were simply directed to alternative compositions. These alternatives were obvious since the use of polymers based on polycyclic monomers was conventional, as demonstrated by D2 and D7.

In the alternative it was argued in the submission of 9 September 2020 that the subject-matter claimed

was rendered obvious on the basis of D7 as the closest prior art in combination with D2 or D17, which taught the use of polymers based on polycyclic monomers in vibration damping compositions.

XIII. The arguments of the respondent can be summarised as follows:

(a) Admittance of documents

D16 and D17 had been cited in respect of examples 13 and 14 of D7 with respect to the feature "polycyclic". However the term "polycylic" had already been introduced during the opposition proceedings with the first auxiliary request of 11 August 2015 meaning that there would have been sufficient time to submit D16 and D17 during the Rule 116 EPC time limit.

Furthermore neither of D16 nor D17 were contemporaneous with D7, and the appellant had provided no evidence that the product "Escorez 5340" had not been modified in the intervening period.

D18 and D19 had simply been cited with no indication as to why these were relevant. In the absence of any explanations it was difficult to understand the description of the documents or to relate these to the present invention. Further the documents had not been invoked either as closest prior art or as secondary/combination documents. Hence D18 and D19 were not *prima facie* relevant and should not be admitted.

D20 and D21 had been filed very late with no justification. On the contrary these related to the same issue for which D16 and D17 had been cited, namely the potential variation in the nature of Escorez 5340 employed in D7. This question had been addressed in the rejoinder and by the Board. Hence these documents could and should have been filed at the very latest in response to the communication of the Board. In any case these were not *prima facie* relevant and hence should not be admitted.

(b) Article 123(2) EPC

The features relating to the nature of component B as having at least one monomer component being a polycyclic compound and the number average molecular weight of said component B were based on original claims 2 and 3. This did not represent a new combination of features which would not have been contemplated by the skilled person in view of the structure of the claims. The defined molecular weight range was the broadest one disclosed in the description as originally filed (paragraph 31), where it was also stated that values outside the indicated range were disadvantageous.

(c) Novelty

Regarding D1 and the definition of the polycyclic compound, the reference in paragraph 31 of the patent to "monocyclo" would clearly be understood by the skilled person to be an error. No monocyclic compound was mentioned in said passage nor were any monocyclic compounds cited as examples of polycyclic compounds. Paragraph 30 made it clear that the term "cyclic structure" referred to a

monocyclic compound or a polycyclic compound which clearly distinguished the two possibilities.

Since the cited example of D1 did not relate to a copolymer having a polycyclic monomer the subject-matter claimed was novel over D1.

Regarding D2, to the extent that the disclosure thereof encompassed polycyclic monomers, a plurality of selections would be required to arrive at such a monomer. Furthermore the compositions of D2 was a mixture formed under shear conditions. From this the skilled person would understand that a matrix/dispersed phase structure as required by the operative claims was not obtained and was not otherwise derivable from the express teaching of D2.

Regarding D7, to the extent that D16 and D17 were to be admitted to the proceedings, they did not show that Escorez 5340 satisfied all requirements of resin B of the claim. It was merely stated that Escorez 5340 was a dicyclopentadiene resin, but the further constitution thereof, in particular the monomers from which it was made, was not reported. Furthermore, due to diverging publication dates of D16 and D17 and the priority date of D7, there was doubt as to whether D16 and D17 necessarily showed the constitution Escorez 5340 as employed in D7. D16 disclosed a value of Mn of 400 which was at the lower limit of the claimed range. Thus a small modification would potentially result in the product failing to meet this feature. Furthermore D7 did not disclose the required structure of the compositions (matrix/dispersed phase). On the contrary, example 1 of D7 reported complete

dissolution of the tackifier, which also appeared to be the case for examples 13 and 14 which were stated to have been prepared in the same way as example 1.

Consequently the subject-matter claimed was novel with respect to D7.

(d) Inventive step

Closest prior art was D1, example 21. The subject-matter claimed was distinguished therefrom by the requirement that component B was a copolymer mandatorily containing a polycyclic compound as one comonomer.

The object of the invention, as set out in paragraph 13 of the patent, was to provide a vibration damping composition effective over a wider temperature range, as indicated by suppression of the reduction of loss factor. This problem was solved by a composition having the defined component B.

As explained in paragraph 17 of the patent the presence of two or more cyclic monomers resulted in some movement within the molecules even at temperatures below the Tg, leading to effective vibration damping over a wide temperature range.

The examples confirmed that this effect was obtained in the range of 10-50°C which was the same range as generally shown in the examples of D1.

The examples of the patent did not permit comparison with the teaching of D1 meaning that

there was no direct evidence for an effect arising from the distinguishing feature. However taking the evidence of the examples as a whole and comparing these with the general teaching of D1, in particular the examples thereof, it was seen that the compositions of the patent gave results in terms of vibration suppression in relation to variation in temperature broadly similar to those of D1.

Hence the technical problem with respect to D1 could be formulated as the provision of alternative composition having approximately equivalent vibration damping performance.

None of the cited documents suggested to employ the defined component B for said purpose. D1 itself contained no teaching associating the suppression of reduction of loss factor with the presence of cyclic structures in general or polycyclic structures in particular. Most of the examples of D1 had only a single cyclic structure. The cited example 21 had two cyclic structures, neither of which was polycyclic.

The cited D18 ad D19, to the extent that they were even to be admitted, did not provide any suggestion to the claimed solution to the problem.

Regarding the attack on inventive step formulated in the letter of 9 September 2020, this was very late. There had been insufficient time to consider this or to discuss this with the respondent. Hence it should not be admitted to the proceedings.

XIV. The appellant requested in writing that the decision under appeal be set aside and that the patent be revoked.

XV. The respondent requested that the appeal be dismissed (main request). In the alternative maintenance of the patent on the basis of one of the sets of claims according to one of the first to fourth auxiliary requests, submitted with the rejoinder to the statement of grounds of appeal, was requested.

Reasons for the Decision

1. Interpretation of the claim

1.1 Significance of features relating to use temperature and Tg

Commencing at line 21 of claim 1 is a passage relating to the use temperature and the glass transition temperature of component B.

The claim however relates to a composition, not a use. Also the wording relating to use as a "vibration damping material" is limiting only insofar as the resin is to be suitable for use in a vibration damping material.

In particular the definition of the Tg by reference to the use temperature in the specified passage relates not to an intrinsic property of the claim but concerns extrinsic factors, i.e. one which arise only when the composition is put to a particular use under a particular set of conditions. Moreover, through the use

of conditional clauses which cover only certain ranges of temperatures, no limitation is put on the glass transition temperature of the resin component B.

Consequently this feature cannot be limiting for the subject-matter of claim 1 and will not be taken into account in the substantive analysis.

1.2 "Polycyclic" or "monocyclic"

The statement in paragraph 31 of the patent that the term "polycyclic" encompasses also monocyclic structures is manifestly incorrect. To subsume monocyclic units under the term "polycyclic" directly contradicts the express meaning of the term. This is confirmed by the fact that no monocyclic entities are included in the list of polycyclic compounds.

Accordingly the Board interprets this feature of the claim as defining what it says - polycyclic - and nothing else.

1.3 Type of structure subsumed under the term "polycyclic"

Regarding the question of whether a polymer generated on the basis of a monomer having two monocyclic structures would be identical to a polymer based on polymerisation of a monomer having a single cyclic structure the Board notes that in the latter case the residues deriving from the functional polymerisable groups would be present between each of the cyclic units, whereas this would not necessarily be the case in the former scenario.

Furthermore, in the specific context of this appeal, it has not been shown that any of the documents under

consideration relate to polymers which could equally be considered as having been derived from polycyclic monomers or from monocyclic monomers. Hence the question of any potential ambiguity or overlap between copolymers derived from monomers having polycyclic structures and polymers derived from a plurality of monocyclic monomers does not arise.

2. Main request

2.1 Added Subject-Matter

As follows from the foregoing section 1.1 the wording relating to Tg and use temperature does not provide a limitation of the subject-matter claimed or otherwise contribute to the definition thereof. Hence by the same token this part of the claim cannot give rise to subject-matter extending beyond the content of the application as originally filed.

2.2 Compared to claim 1 as originally filed, operative claim 1 contains two additional features:
- the requirement that component B is a copolymer containing at least one monomer component having a polycyclic compound in a main chain or a side chain thereof;
- the definition of the number average molecular weight of component B.

These features are to be found, respectively, in claim 3/page 6, lines 13-15 and claim 2/page 14, lines 16-19 of the application as originally filed, whereby both claims 2 and 3 are dependent on claim 1.

Original claim 2 specifies that copolymer B contains a monomer component having "a monocyclic compound and/or

a polycyclic compound in a main chain or a side chain thereof". Thus three possible embodiments are disclosed:

- monocyclic;
- polycyclic;
- a combination of the two.

Operative claim 1 is restricted to the third of these.

The number average molecular weight is disclosed in original claim 3. In the originally filed description this feature is additionally discussed at page 16, first paragraph. The broadest range given is 400 to 8000, which is the range defined in operative claim 1. Furthermore it is explicitly stated that values outside this range are undesirable. Accordingly the most general disclosure of the application as filed in respect of the numerical range of the number average molecular weight of component B is the range defined in claim 1. The specification of this in the claim therefore does not constitute a selection with respect to the application as filed.

Thus, contrary to the position of the appellant (see section XI.(b), above) the Board can identify only a single selection that has been made with respect to the disclosure of the application as filed, which amounts to claiming subject-matter which is directly and unambiguously derivable from the application as originally filed.

The requirements of Article 123(2) EPC are therefore satisfied.

2.3 Novelty

2.3.1 In D1, example 21 (page 13, Table 4 and page 14, note 11) a copolymer based on 4-vinyl phenol and styrene is reported. Each of these monomers is monocyclic. As follows from the above considerations on interpretation of the claims such copolymers do not satisfy the requirement that at least one monomer component contains a "polycyclic" compound in a main chain or a side chain, so that novelty over D1 is acknowledged.

2.3.2 With respect to D2 the appellant relies on the above dismissed interpretation of "polycyclic" in particular with reference to claim 9 thereof which specifies a phenolic resin which can optionally be substituted *inter alia* by phenyl, aryl or phenyl alkyl groups (see section 2.3). The central matter here is that according to claim 1 of D2 the structure of the second - higher Tg - resin is not specified. In claim 8 this is defined as comprising phenolic resin, acrylic resin, polyphenylene ether resin or combinations thereof, and in the aforementioned claim 9 various embodiments of the phenolic resin are disclosed, which include structures having substituents selected from the three mentioned aryl groups. In claim 10 the Mn of the phenolic resin of claim 8 is defined as 300-1000 which extends below the lower limit of the operative claim. Whilst polymers of the required structure and Mn are encompassed within the general teaching of D2, there is no explicit disclosure of any such polymers. On the contrary, a plurality of independent, non-directed selections from within its disclosure would be required to "assemble" the required subject-matter.

A further aspect is the morphology of the product. D2 employs mixing under shear conditions (passage bridging

pages 11 and 12) which indicates that an intimate, homogeneous mixture rather than the required matrix/ dispersed phase structure would be obtained. Hence it also cannot be concluded that D2 necessarily provides a disclosure of this feature of the claims.

Therefore novelty over the disclosure of document D2 is acknowledged.

2.3.3 D7

This document, submitted with letter of 17 November 2016 and thus outside the 9 month opposition period, was admitted by the opposition division.

Examples 13 and 14 were invoked. These employ the product Escorez 5340 as tackifier.

Together with the statement of grounds of appeal the appellant submitted the two documents D16 and D17 which it was argued would disclose the nature of said material.

Regarding admittance of D16 and D17 the Board is satisfied that these constitute a response to the findings of the decision, in particular the non-admittance of the datasheet submitted at that stage (see section V.(a), above). Consequently there would have been no reason or opportunity to provide these at an earlier stage of the proceedings.

In respect of relevance (*prima facie*), both these documents relate or refer explicitly to Escorez 5340 - the tackifier of interest - and include information about its constitution. Accordingly the Board concludes

that D16 and D17 are, *prima facie*, relevant and therefore are admitted to the procedure.

D16 merely states that the compounds are cycloaliphatic but does not specify that these are polycyclic. D17 (which is a patent document and not a datasheet of the product) mentions only that the product in question is a dicyclopentadiene resin. However the operative claim requires that component B be a copolymer. D17 contains no information about the presence of any other monomers in Escorez 5340, meaning that this document does not establish that Escorez 5340 corresponds to component B as defined in operative claim 1.

A further aspect is that according to example 1 of D7 the tackifier is completely dissolved in the main (acrylate) resin. Examples 13 and 14 are stated to have been prepared in the same way as example 1, indicating that also a solution was prepared. Accordingly it cannot be concluded that D7 provides a disclosure of the morphology as defined in operative claim 1.

The respondent raised the question as to the reliability of the disclosure in these documents since neither is contemporaneous with D7 (priority date of 22 November 1994). D16 is dated February 2006 whilst D17 has a priority date of 27 June 2000, meaning that it was doubtful whether these documents can be regarded as disclosing the nature of Escorez 5340 at the relevant time. However in the light of the foregoing with respect to the technical disclosure of D16 and D17, this question does not need to be addressed.

D20 and D21 were submitted in response to the above discussed doubts with respect to the evidential value of D16 and D17 which were set out by the Board in its

communication. However these documents were filed extremely late - on the penultimate day of the appeal proceedings. There was no reason why they could not have been submitted earlier. Furthermore, neither of these provide any more information about the nature of Escorez 5340 than either of the documents already in the procedure. Consequently these are also not relevant to the question to be answered. D20 and D21 therefore are not admitted to the procedure.

The subject-matter of the main request is therefore also novel over document D7.

2.4 Inventive step

2.4.1 Admittance of D18 and D19

These documents were provided in the nature of general background relating to vibration absorbing compositions. However the appellant did not provide any explanation as to why these were relevant to the subject-matter claimed:

- It was not argued that these had been cited in order to address the findings of the decision of the opposition division;
- These were not presented as either the closest prior art or secondary, combination documents and
- It was not indicated how these would provide any other relevant teaching e.g. relating to the structure of the composition claimed.

Under these circumstances there are no grounds for concluding that D18 and D19 are relevant to the present case with the result that they are not admitted to the

procedure (Article 12(4) RPBA 2007).

2.4.2 Admittance of the objection submitted with letter of 9 September 2020

With the stated letter the appellant provided, for the first time, an attack against inventive step based on the disclosure of D7 in combination with D2 and D17.

No justification for the late filing of this objection, e.g. reference to developments in the latter stage of the appeal proceedings, was provided. Nor can any circumstances which would have justified advancing this objection one day before the oral proceedings be identified by the Board.

On the contrary, the Board provided an analysis of the case with its communication of 28 April 2020 and there had been adequate time for the parties to make any necessary further substantive submissions well in advance of the oral proceedings.

The representative of the respondent indicated that it was not in a position to deal with this attack, since there had not been sufficient time to discuss this with the relevant specialists at the respondent company.

Accordingly the Board, pursuant to Article 13(1) and (3) RPBA 2007 (which applies in view of Article 25(3) RPBA 2020) does not admit this new argument to the proceedings.

2.4.3 Closest prior art

The patent in suit is directed to the problem of providing resin compositions for vibration damping

materials and the resulting damping material (paragraph 1).

As explained in paragraph 3 of the patent in order to be effective, the materials must be used at temperatures near the Tg. Materials containing a single polymer necessarily have a narrow Tg peak, and hence a narrow temperature region of maximum loss factor, which is required for vibration damping.

The patent identifies the problem of broadening the temperature range at which the absorbing materials can effectively be used (paragraphs 3 and 4).

Thus the object of the patent is to provide a resin composition for vibration damping materials which material exhibits high vibration damping performance over a wide temperature range and the resulting damping materials (paragraph 13).

According to the decision (paragraph 14.3.1) the closest prior art was D1, example 21.

The appellant in section 6 of the statement of grounds of appeal invoked D1, D2, D7 and the newly filed D18 and D19. However the findings of the opposition division were not discussed. No analysis following the structure of the problem-solution approach on the basis of any of D2, D7, D18 or D19 as the closest prior art was advanced and it was not explained why any of these documents should be adopted as the closest prior art instead of D1 and why these documents would lead to a finding of lack of inventive step.

The respondent in section 5 of the rejoinder followed the position of the decision, basing the arguments on

D1 as the closest state of the art.

The Board can identify no reasons in the submissions of the appellant to depart from the position of the decision under appeal in respect of the selection of D1 as the closest prior art.

2.4.4 Distinguishing feature

As noted in section 2.3.1 above, the subject-matter claimed is distinguished from the disclosure of D1 by the mandatory presence of a monomer having a polycyclic structure.

2.4.5 Technical effect

None of the the examples/comparative examples of the patent are suitable to provide a direct comparison with the disclosure of D1 and hence do not permit an effect associated specifically with the distinguishing feature to be identified. This has not been disputed by the respondent.

The examples however show that, in general, the compositions according to the claims exhibit only a small variation in loss factor over the temperature range of 10-50°C.

The examples of D1 show that an adequate loss factor for vibration damping, namely above 0.08, is achieved over approximately the same temperature ranges from 10-50°C to 16-58°C depending on which resonance is considered.

Thus it is seen that the claimed compositions provide vibration damping properties over roughly the same

temperature range as those of D1.

2.4.6 Objective technical problem

In the light of the foregoing the only possible formulation of the objective technical problem is as being to provide alternative compositions to those of D1 which broadly exhibit the same vibration damping performance.

2.4.7 Obviousness

D1 teaches that the vibration damping agent is a polyvinyl phenol-based resin whereby the phenol ring can be substituted by alkyl groups, an alkoxyl groups or halogen atoms. It is not taught that a further ring system can be employed as the substituent. Accordingly D1 itself does not provide any incentive to employ a polycyclic monomer.

Regarding the other documents cited, D2 discloses in claims 8 and 9 and in the description, page 6 from line 21 that phenolic resins can be employed as the second component. According to the generic formula II these can be substituted, the permitted substituents including cyclic residues, e.g. phenyl, aryl, phenyl alkyl. However there is no explicit disclosure of any compositions containing such a polymer, nor is there any discussion of the likely effect of such a polymer on the vibration damping properties of the compositions. Furthermore it has not been shown that D2 discloses the required morphology.

Hence D2 cannot provide any teaching to employ a composition containing a polycyclic monomer in view of solving the above formulated problem.

Similarly, as follows from the above considerations in respect of the disclosure of D7, this document also cannot provide any hint to the claimed subject-matter as a solution to the defined problem since neither the required component B nor the necessary morphology is disclosed.

2.4.8 Accordingly the subject-matter of the main request is not rendered obvious by the cited prior art and the presence of an inventive step is to be acknowledged.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

B. ter Heijden D. Semino

Decision electronically authenticated