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Datasheet for the decision of 10 June 2022

Case Number: T 0538/19 - 3.3.03

Application Number: 07829397.4

Publication Number: 2075271

IPC: C08G18/38, G02B1/04, C08G18/52, C08G18/75

Language of the proceedings: EN

Title of invention:
METHOD FOR PRODUCING RESIN FOR OPTICAL MATERIAL

Patent Proprietor:
Mitsui Chemicals, Inc.

Opponents:
Bruno Bock Chemische Fabrik GmbH & Co. KG
Covestro Deutschland AG

Relevant legal provisions:
RPBA Art. 12(4)
RPBA 2020 Art. 13(1), 13(2)
EPC Art. 54(1), 56

Keyword:

Documentary evidence admitted (yes) - normal developpments in the opposition appeal proceedings
Novelty (yes) - no direct and unambiguous disclosure
Inventive step - obvious alternative
Auxiliary request submitted during the oral proceedings not admitted - no cogent reasons

Decisions cited:

G 0003/89, G 0011/91, G 0001/03, G 0002/10, T 0012/81, T 0939/92

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Case Number: T 0538/19 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 10 June 2022

Appellant: (Opponent 2)	Covestro Deutschland AG Kaiser-Wilhelm-Allee 60 51373 Leverkussen (DE)
Representative:	Davepon, Björn Patentanwaltskanzlei Davepon Schloss Dyck 41363 Jüchen (DE)
Respondent: (Patent Proprietor)	Mitsui Chemicals, Inc. 5-2, Higashi-Shimbashi 1-chome Minato-ku Tokyo 105-7117 (JP)
Representative:	Mewburn Ellis LLP Aurora Building Counterslip Bristol BS1 6BX (GB)
Party as of right: (Opponent 1)	Bruno Bock Chemische Fabrik GmbH & Co. KG Eichholzer Strasse 23 21436 Marschacht (DE)
Representative:	Patentanwälte Olbricht Buchhold Keulertz Partnerschaft mbB Neuer Wall 57 20354 Hamburg (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 19 December 2018 concerning maintenance of the European Patent No. 2075271 in amended form.**

Composition of the Board:

Chairman	O. Dury
Members:	F. Rousseau
	L. Basterreix

Summary of Facts and Submissions

I. The appeal lies against the decision by the opposition division according to which European patent No. 2 075 271 as amended according to auxiliary request II filed with letter of 13 September 2018 met the requirements of the EPC.

II. The opposition proceedings were based among others on the following items of evidence:

D2: 21 COE MMRC Discussion paper No. 34, "Product Development and Customer Systems in Functional Chemistry (3)", Mitsui Chemical, Tokyo University, April 2005, English translation
D10: EP 1 138 670 A1
D16: EP 0 645 647 A1
D20: Third party observations
D40: Memorandum, experimental report dated 7 September 2018, 5 pages
D47: Experimental report concerning examples 1 and 6 of D10.

III. According to the reasons for the contested decision relating to auxiliary request II which are pertinent for the appeal proceedings, the following conclusions were reached:

Admittance of evidence

(a) Whereas the second experimental report of D40 (page 4) was admitted in the proceedings, the other experimental reports of D40 (pages 1-3, 5) were not admitted. D47 was admitted into the proceedings.

Novelty

(b) The subject-matter of claim 1 was novel over D10. In this respect, neither D47, nor D10 (example 6) had been exactly replicated with D40 (page 4).

Inventive step

(c) The closest prior art was represented by example 6 of D10 from which the subject-matter of claim 1 differed by a water content in the polymerizable composition in the range of 10 to 300 ppm. Having regard to the technical evidence contained in the patent in suit, the objective technical problem could "*be formulated as decreasing the striation occurrence and the clouding occurrence*". Since none of the cited documents suggested that such amount of water would bring about those technical effects, an inventive step was acknowledged for the process of claim 1.

IV. An appeal against that decision was lodged by opponent 2 (appellant).

V. The appellant submitted with the statement of grounds of appeal the following document:

D55: Experimental report.

VI. The patent proprietor (respondent) submitted with their reply to the statement of grounds of appeal (letter of 4 September 2019) four sets of claims as auxiliary requests I to IV, as well as the following documents:

D56: Experimental report concerning examples 1 and 6 of D10, pages 1-4
D57: Experimental report concerning examples 1 and 6 of D10, pages 1-3.

VII. The appellant submitted with letter of 29 July 2020 *inter alia* the following document:

D58: Declaration of Mr. Maleika dated 30 March 2020.

VIII. Oral proceedings before the Board were held on 10 June 2022 in course of which the respondent filed an additional auxiliary request V.

IX. The appellant requested that the decision under appeal be set aside and the patent be revoked. The appellant further requested, should the Board remit the case to the opposition division for further prosecution, full or partial reimbursement of the appeal fee.

X. The respondent requested that the appeal be dismissed, or alternatively that the decision under appeal be set aside and that the patent be maintained in amended form on the basis of any of auxiliary requests I to IV filed with the reply to the statement of grounds of appeal (letter of 4 September 2019), or in the alternative on the basis of auxiliary request V filed during the oral proceedings.

XI. Claim 1 of the main request, corresponding to auxiliary request II underlying the contested decision, reads as follows:

"1. A process for producing a resin for an optical material by polymerizing a polymerizable composition comprising a polythiol compound and a

polyiso(thio)cyanate compound, characterized in that a water content in the composition is 10 to 300 ppm."

Claims 1 of auxiliary requests I and III are identical to claim 1 of the main request.

Claims 1 of auxiliary requests II and IV differ from claim 1 of the main request in that the upper limit for the content of water is defined to be 200 ppm instead of 300 ppm.

Claim 1 of auxiliary request V differs from claim 1 of the main request in that it comprises at the end of the claim the wording "wherein the polyiso(thio)cyanate compound comprises at least one alicyclic isocyanate compound".

XII. The appellant's submissions, in so far as they are pertinent, may be derived from the reasons for the decision below. They are essentially as follows:

(a) D55 should be admitted into the proceedings. D56 and D57 should not be admitted into the proceedings should D55 not be admitted.

(b) The subject-matter of claim 1 of the main request lacks novelty and an inventive step over the composition described in example 6 of D10. The same applies to claims 1 of auxiliary requests I to IV.

(c) Auxiliary request V should not be admitted into the proceedings.

XIII. The respondent's submissions, in so far as they are pertinent, may be derived from the reasons for the decision below. They are essentially as follows:

(a) D55 and D58 should not be admitted into the proceedings. D56 should be admitted into the proceedings should the Board decide to admit D55. D57 should be admitted into the proceedings.

(b) The subject-matter of claim 1 of the main request or of claim 1 of any of auxiliary requests I to IV is novel and involves an inventive step over the composition described in example 6 of D10.

(c) Auxiliary request V should be admitted into the proceedings.

XIV. The party as of right (opponent 1) did not make any submissions.

Reasons for the Decision

Admittance of D55 to D57

1. The admittance of D55 to D57 which were submitted either with the statement of grounds of appeal or the rejoinder thereto is subject to the Board's discretionary power under Article 12(4) RPBA 2007. All these documents relate to the disclosure of example 6 of D10 which was considered in the contested decision as the closest prior art.

1.1 The appellant submits that D55 is a replication of experiments 1 and 6 of Dl0 aimed at demonstrating that example 6 of D10 would anticipate the subject-matter of claim 1. Its filing would be a timely response to the view of the opposition division expressed for the first

time during the oral proceedings according to which the second experimental report of D40 and D47 could not convincingly show that the water content of the compositions exemplified in D10 was in the range defined in claim 1 of the granted patent, which is identical to operative claim 1.

The respondent submits that D55 is not relevant and should not be admitted, since it is not a direct rework of the examples of D10. In addition it should have been filed earlier, since D10 had been filed with the notice of opposition.

1.2 It is undisputed that the experimental report D47 filed by the patentee before the opposition division was also meant to replicate examples 1 and 6 of D10 in order to determine the water content of the polymerizable mixture used in example 6 of D10. According to D47 the water content in the monomer mixture obtained in example 6 was 339 ppm, which value however did not take into account a subsequent degassing step at 0.6 kPa for 1 hour. Opponent 2 argued based on the second report of D40 that such degassing would result in a monomer mixture having a water content within the range defined in operative claim 1. This was held by the opposition division to be speculative, as no evidence had been provided that a degassing step carried out under those conditions would be sufficient to decrease the water content from 339 ppm to a value of at most 300 ppm.

The filing of D55 by the appellant, independently of whether or not that experiment report can be considered a direct rework of the examples of D10, constitutes therefore a *bona fide* and timely answer to D47 submitted two months before the oral proceedings before the opposition division.

D56 filed by the respondent exactly addresses in a timely manner the alleged speculative character of the argument according to which a subsequent degassing step at 0.6 kPa for 1 hour would lower the water content to a level of at most 300 ppm.

D57 is an experimental report alleged to describe the reproduction of lenses in accordance with the teaching of example 6 of D10. It was submitted in response to the criticism by the appellant before the opposition division that no effect over the lenses produced with example 6 of D10 had been demonstrated.

1.3 Under these circumstances, the submission of D55 to D57 at the outset of the appeal proceedings pursuant to Article 12(2) RPBA 2007 is the result of normal developments in the opposition appeal proceedings so that the Board has no reason to make use of its discretionary power under Article 12(4) RPBA 2007 and to hold those documents inadmissible.

Admittance of D58

2. The submission by the appellant of D58 with letter of 29 July 2020, i.e. after the filing of the respondent's rejoinder and before the oral proceedings had been arranged, represents an amendment to the appellant's case within the meaning of Article 13(1) RPBA 2020 whose admittance is at the Board's discretion. The Board agrees with the appellant that declaration D58 aims at dispel doubts concerning the probative value of experimental data D55. Even if D58 could have been submitted earlier, it is not detrimental to procedural economy and addresses the criticisms about D55 expressed by the respondent during the appeal

proceedings. On that basis, the Board made use of its discretion pursuant to Article 13(1) RPBA 2020 and admitted D58 into the proceedings.

Novelty of process claim 1 over Example 6 of D10

3. Example 6 of D10 describes in its paragraph [0075] the preparation of a lens by polymerizing a polyiso(thio)cyanate compound (m-xylylenediisocyanate), a polythiol compound (1,1,3,3-tetrakis-(mercaptomethylthio)propane) in the presence of a catalyst, an internal mold release agent and a UV absorber. The mixture, injected into a lens mold after a degassing step at 0.6 kPa for 1 hour, is gradually heated from 40 °C to 130 °C and cured for 20 hours, this step being followed by a cooling step. It is undisputed that the sole feature potentially distinguishing the subject-matter of operative claim 1 from example 6 of D10 is a water content of the polymerizable composition within the range of 10 to 300 ppm.

4. Having regard to the well established principle laid down in the Case Law, since decision T 12/81 (OJ EPO 1982, 296), according to which a product inevitably resulting from a process properly defined as to its starting substance and reaction conditions is considered to be disclosed even if it is not cited *expressis verbis* in said document (Case Law of the Boards of Appeal of the EPO, 10th edition 2022, I.C. 4.3), it has to be decided in the present case whether a water content of the polymerizable composition within the range of 10 to 300 ppm as required by operative claim 1 is the inevitable result of the synthesis described with example 6 of D10.

In this respect, the appellant refers to experimental reports D20, D55 and D58, alleged to show that the polymerizable composition described in example 6 of D10 has a water content within the range expressed in operative claim 1 and the respondent relies upon experimental reports D47, D56 and D57 held to demonstrate the opposite.

It is undisputed that a potential source of water in the polymerizable composition of example 6 of D10 is the preparation of the polythiol compound which is described in example 1 of that document. According to paragraph [0063] of D10, the last step of the preparation of said polythiol is a phases separation carried out by adding appropriate amounts of water and chloroform, the chloroform layer being washed with water several times. After removal of the chloroform and components with a lower boiling point by evaporation, the residue is filtrated through a 3 µm Teflon® filter to give the polythiol compound used for the polymerization.

5. The Enlarged Board reminded in decisions G 1/03 (OJ EPO 2004, 413, point 2.2.2 of the Reasons) and G 2/10 (OJ EPO 2012, 376, point 4.6 of the Reasons) that the concept of disclosure must be the same for the purposes of Articles 54, 87 and 123 EPC, which concept defined in opinion G 3/89 and decision G 11/91 of the Enlarged Board of Appeal (OJ EPO 1993, 117 and 125, respectively) was reaffirmed in decision G 2/10 (supra, point 4.3 of the Reasons).

In application of that concept and taking into account the principle indicated in above point 4, the question to be answered is whether the skilled person would derive directly and unambiguously from D10 synthesis

conditions for the polythiol compound which inevitably result in a water content of the polymerizable composition within the range of 10 to 300 ppm.

It was undisputed at the oral proceedings before the Board that the water content of the polythiol compound prepared in example 1 of D10 is dependent on the conditions employed in the evaporation step used for removing chloroform and components with a lower boiling point. However, example 1 does not provide any details concerning this evaporation step which are crucial to determine whether the amount of water remaining in the polythiol compound results in a water content within or above the range defined in operative claim 1.

On that basis and independently on whether or not the synthesis conditions applied in the various experimental reports relied upon by the parties, in particular those of the evaporation step, were reasonable for a skilled person, it is not possible to derive directly and unambiguously from the disclosure of D10 conditions which would allow to determine the inevitable result in terms of water content of the polythiol compound prepared in example 1 of D10, and consequently the water content of the polymerizable composition described in example 6 of D10.

6. The appellant submits that even if the amount of water present in the composition of example 6 of D10 were at the beginning of the reaction above the limit defined in operative claim 1, the reaction of the polyisocyanate compound with water during the polymerization reaction would result in the water level at a certain stage of the polymerization process to be comprised within the level defined in operative claim

1. Reference is made by the appellant to the second report of D40.

This additional objection fails to convince as the composition whose water content is defined in operative claim 1 to be in the range of 10 to 300 ppm is that employed for producing the resin. It is therefore implicitly defined to be that used at the beginning of the process.

7. Consequently, novelty of the subject-matter of operative claim 1 over example 6 of D10 is acknowledged (Article 54 (1) EPC).

Inventive step of process claim 1 over D10

8. The opposition division considered that the closest prior art was represented by the method described in example 6 of D10. It is undisputed that the polymerization process described in this example constitutes a suitable starting point for assessing inventive step of the process of present claim 1. The Board has no reason to have a different opinion. It follows from the above novelty analysis that the process of claim 1 differs from the closest prior art solely in that the water content of the polymerizable composition is within the range of 10 to 300 ppm.

Problem successfully solved

9. Having regard to the disclosure of the closest prior art, the respondent and the appellant take differing positions as to which problem can be considered to be successfully solved by the subject-matter of operative claim 1. Relying on the experimental results described in the patent in suit, the respondent argues that the

technical problem solved with respect to the closest prior art is the provision of a process for producing a resin that may suitably be used for making an optical material, such as a lens, that is transparent, colourless and may be produced in high yields with reduced occurrence of striation or clouding, whereas the appellant submits that the problem solved by the claimed subject-matter is to provide a further process for the production of polythiourethane resins for optical applications.

Having regard to the respondent's contention that the occurrence of striation and clouding is the result of a too large amount of water in the polymerizable composition, the issue to be decided is not whether the occurrence of striation and clouding has been reduced in comparison with the closest prior art by a diminution of the water content in the polymerizable composition, since the water content of the polymerizable composition in example 6 of D10 is unknown having regard to a lack of details concerning the preparation of the polythiol compound (see above analysis of novelty), but rather whether the selection of a water content in the range of 10 to 300 ppm for the polymerizable composition has been shown to result in the production of satisfactory lenses with respect to striation and clouding occurrences.

10. It is undisputed that the limit of 300 ppm defined in operative claim 1 could be considered as critical to obtain low occurrence of striation and clouding, as far as the specific processes described in the examples and comparative examples of the patent in suit are concerned. The appellant, however, argues that the tests relied on by the respondent do not concern a system similar to the one used in the closest prior

art, as the monomers, the amount of catalyst and the temperature conditions used for the polymerization, which are all held to have an impact on the polymerization speed, are different. The appellant's argument refers to the indication in paragraphs [0008] to [0010] of the patent in suit that the occurrence of striation and clouding is closely related to the polymerization rate. As stated in paragraph [0009] it became "*generally possible to produce a highly transparent lens without striation or clouding at a high yield by selecting a catalyst amount and a temperature rise pattern suitable for a particular lens form in the production of the lens*". Furthermore, as specified in paragraph [0009] "*it has been discovered that by maintaining the water content in the polymerizable composition within a certain range, the decrease of the polymerization rate was inhibited and a high performance polyurethane resin lens, that is transparent and colorless without clouding or striation, can be obtained*".

11. It is established case law that if a claimed invention is based on a given technical effect, the latter should be achievable over the whole area claimed (Case Law, supra, I.D.4.1), reference being in particular made to landmark decision T 939/92 (OJ EPO 1996, 309, see point 2.5.4 of the reasons) according to which a purported technical effect can only form the basis for the assessment of inventive step if it could be fairly assumed that this technical effect occurs across the whole breadth of the claim. Therefore, having regard to the above appellant's submissions, the question arises in the present case whether or not the selection of a water content in the polymerizable composition in the range of 10 to 300 ppm may be expected to be associated with the production of satisfactory lenses with respect

to striation and clouding occurrences, in particular when other monomers than those used for the comparative tests contained in the patent in suit are employed.

In that respect, it is first noted that the resins prepared in the examples of the patent in suit and in example 6 of D10 were obtained using different components. Whereas 1,3-xylene diisocyanate, an aromatic diisocyanate, is used in the closest prior art, the examples and comparative examples of the patent in suit concern the polymerization of alicyclic isocyanate compounds, i.e. dicyclohexylmethane diisocyanate or a mixture of two norbornene based diisocyanates (2,5-bis(isocyanato-methyl)-bicyclo-[2.2.1]heptane and 2,6-bis(isocyanato-methyl)-bicyclo[2.2.1]heptane)). In addition, the polythiol compound of the closest prior art is 1,1,3,3-tetrakis (mercaptomethylthio)propane, whereas the examples and comparative examples of the contested patent concern either 1,2-bis[(2-mercaptoethyl)thio]-3-mercaptopropane alone or in admixture with pentaerythritol tetrakis-(mercaptopropionate) or a mixture of bis(mercapto-methyl)-3,6,9-trithia-1,11-undecanedithiol and pentaerythritol tetrakis-(mercaptopropionate).

In the Board's view, there is *a priori* no reason to expect that the polymerization rate whose control is indicated in the patent in suit to be essential for the achievement of the effects relied upon by the respondent would be similar when monomers having structures different from those used in the examples of the patent in suit are employed. In this respect, the polyiso(thio)cyanates and polythiols to be used according to the teaching of the patent in suit (from page 3, line 43 to page 4, line 38 and from page 4, line 47 to page 6, line 39, respectively) exhibit

various structures differing from the specific polyiso(thio)cyanates and polythiols used in the examples of the patent in suit. This is in particular the case for aromatic polyisocyanates, as used in example 6 of D10.

There is therefore no reason to expect that a water content of the polymerizable composition of 300 ppm, held for the particular monomeric systems of the examples of the patent in suit to constitute an appropriate threshold value below which the polymerization rate is such that the production of lenses with respect to striation and clouding occurrences becomes satisfactory, would generally lead to satisfactory results when other monomeric systems as generally defined in operative claim 1, in particular those based on aromatic polyisocyanates as used in example 6 of D10, are employed.

Moreover, as pointed out by the appellant, an indication of the proportion of lenses exhibiting striation and clouding in the context of a polymerization process as used in example 6 of D10 is provided with experiment 2 of D57 filed by the respondent. In that experiment, a polymerization carried out as taught for example 6 of D10 (i.e. among others with the same aromatic monomers), but with a water content of the polymerizable composition of 341 ppm results in an incidence of 64,5% of striation. This result is even less satisfactory than the result obtained with a water content of 1000 ppm used for comparative purposes in comparative example 2 of the patent in suit using an alicyclic polyisocyanate. Experiment 2 of D57 casts therefore doubts on whether a limit of 300 ppm for the water content of the polymerizable composition, a value which is close to

341 ppm tested in D57, is necessarily critical for obtaining satisfactory lenses with respect of striation and clouding occurrences when other monomers than those used in the context of the examples of the patent in suit are employed.

In these circumstances and in the absence of further evidence or a technical explanation concerning the validity of this threshold value of 300 ppm for the water content of the polymerizable composition, regardless of the choice of the polyiso(thio)cyanate and polythiol compounds, there is no reason to expect that an amount of water within the range of 10 to 300 ppm would necessarily coincide with the production of satisfactory lenses with respect of striation and clouding occurrences. The mere fact that the content of water defined in claim 1 is acceptable for the three production processes exemplified in the patent in suit based on two specific alicyclic isocyanate compounds and three specific polythiol compounds, as was pointed out by the respondent, is not sufficient to demonstrate that a similar result - which is said in the patent in suit to be related to the reaction kinetics (see section 10 above)- is to be expected across the whole breadth of operative claim 1. The alleged criticality of a water content in the polymerizable composition in the range of 10 to 300 ppm to produce satisfactory lenses in respect of striation and clouding occurrences is therefore speculative and must be disregarded for the formulation of the objective problem.

On that basis the problem solved over the closest prior art has to be formulated along the line proposed by the appellant, namely as the provision of a further process for the production of polythiourethane resins for optical applications.

Obviousness of the solution

12. It remains to be decided whether the skilled person desiring to solve the above problem would, in view of the disclosure of D10, possibly in combination with other prior art documents or with common general knowledge, have modified the process of example 6 of D10 in such a way as to arrive at the process of operative claim 1.

12.1 It is undisputed, as illustrated by D2 (page 10, third paragraph and page 11, first paragraph) and indicated in paragraph [0010] of the specification, that the presence of water in the polymerizable composition used for the production of polythiourethane resins by reaction of a polythiol compound and a polyiso(thio)-cyanate compound was known in the art to be prejudicial to the optical quality of the lenses, since tiny amounts of water resulted in foaming and optical defects of the lenses. As shown above, the mere indication of a numerical range for the water content of the polymerizable composition is neither critical nor can it be seen as a purposive choice for solving the problem underlying the patent in suit. Moreover, it is also undisputed that means to achieve a water content of the polymerizable composition within the range of 10 to 300 ppm which are described in paragraph [0015] of the specification were available to the skilled person and did not require any inventive skills.

On this basis, the arbitrary selection of a water content as defined in present claim 1 can only be seen as an obvious measure for the skilled person faced with the problem of providing a further process for the

production of polythiourethane resins for optical applications.

12.2 The respondent submits that the skilled person was aware that a reduction of the level of water to a level of 1000 ppm would be sufficient to suppress foaming and that they would not for this reason consider to go below that level, let alone below the extremely low level defined in operative claim 1, taking also into account the costs associated with the additional means required for this measure.

This argument must fail because the answer to the question as to what a person skilled in the art would have done in the light of the state of the art depends on the technical result the skilled person had set out to achieve (T 0939/92, supra, reasons Nrs 2.4.2 and 2.5.3). Here the skilled person is merely seeking to provide a further process for the production of polythiourethane resins for optical applications. Even if the appellant's allegation that a water content of 1000 ppm water in the polymerizable composition was known to the skilled person to be sufficient to avoid the formation of foaming, the skilled person wishing to provide a further process would still see as a possibility to further reduce the water content of the polymerizable composition. They would do so, not only because this would add an additional safety margin for the production of lenses which do not exhibit imperfections due to foaming, but because also tiny amounts of water, even if tolerable when the formation of foaming is to be avoided, leads in view of the common general knowledge and as submitted by the appellant to a change of the structure of the polymers sought to be obtained. As stressed by the respondent in relation to novelty of the product claims (rejoinder,

page 33, 6th paragraph) water reacts with other components during polymerization and hence changes the structure of the polymers and resins produced, i.e. by forming aminogroups through reaction of water with isocyanate groups, which aminogroups in turn are reactive towards isocyanate groups competing with the reaction meant to be obtained with thio groups.

As to the alleged additional costs linked with that measure, it has not been made credible that they would discourage the skilled person to obtain a purer polymerizable composition. Moreover, the skilled person is in the present case merely deemed to provide a further process for the production of polythiourethane resins for optical applications, but not to provide at the same time a more economical method. On that basis, the skilled person is considered to accept the alleged foreseeable disadvantage of higher costs, which does not necessitate any inventive activity.

12.3 Accordingly, the skilled person starting from the teaching of example 6 of D10 and seeking to provide a further process for the production of polythiourethane resins for optical applications would have found obvious to use a polymerizable composition having the water content defined in operative claim 1, arriving thereby in an obvious manner at the subject-matter of present claim 1.

13. Consequently, the subject-matter of claim 1 of the main request does not involve an inventive step within the meaning of Article 56 EPC and this request cannot be allowed.

Auxiliary request I to IV

14. As far as auxiliary requests I and III are concerned, those are also not allowable since their claims 1 are identical to claim 1 of the main request. Concerning auxiliary requests II and IV, their claims 1 differ from claim 1 of the main request in that the upper limit for the water content of the polymerizable composition is 200 ppm instead of 300 ppm. However, the selection of a lower value for the upper limit of the water content of the polymerizable composition has no impact on the definition of the problem effectively solved over the method described in example 6 of D10 and lowering the water content to at most 200 ppm instead of 300 is for the same reasons as indicated in relation to the main request an obvious measure for the skilled person. Under these circumstances, none of auxiliary requests I to IV is allowable either.

Admittance of Auxiliary Request V

15. Auxiliary Request V was filed at oral proceedings after the Board had announced their conclusion in respect of the allowability of the requests of higher ranking. Its submission represents an amendment to the respondent's case within the meaning of Article 13(2) RPBA 2020.

15.1 According to Article 13(2) RPBA 2020, any amendment to a party's appeal case made after notification of a summons to oral proceedings shall, in principle, not be taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.

The filing of auxiliary request V was justified by the respondent by the need to reconsider their position in view of the Board's preliminary opinion provided in points 27 to 27.3 of the communication dated 13 May 2022 according to which the technical benefits relied upon by the respondent and therefore the formulation of the problem could not be accepted as far as the whole breadth of claim 1 was concerned. However, the Board's preliminary view that the experimental tests contained in the patent in suit appeared to lack probative value, as they were not based on a comparison with the closest prior art, was based on the appellant's statement of grounds of appeal (section b) on page 33 and section c) on page 34), as well as on the appellant's further submissions in their letter of 29 July 2020 (point 2 on page 20 referring to the analysis made on page 19 and 20 in the context of D16 taken as the closest prior art).

An indication of the Board's preliminary opinion on certain issues addressed in the communication sent for preparing oral proceedings which is solely based on the parties' submissions, i.e. without any additional point introduced by the Board, does not represent an exceptional circumstance, but rather the norm as "In most cases, the Board will give a preliminary opinion in its communication" (Supplementary publication 1, OJ EPO 2020, page 223, explanatory notes to Article 15(1) RPBA 2020).

15.2 Therefore, the board, exercising its discretion under Article 13(2) RPBA 2020, did not admit auxiliary request V into the appeal proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

B. ter Heijden O. Dury

Decision electronically authenticated