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**Datasheet for the decision
of 31 August 2022**

Case Number: T 1564/20 - 3.2.01

Application Number: 10715429.6

Publication Number: 2421750

IPC: B64C1/12, B64C1/40, B32B5/18,
B32B27/12, C08J7/06

Language of the proceedings: EN

Title of invention:

COMPOSITE LAMINATE FOR A THERMAL AND ACOUSTIC INSULATION
BLANKET

Patent Proprietor:

E. I. du Pont de Nemours and Company

Opponents:

COGEBI Société Anonyme
JEHIER SAS

Headword:

Relevant legal provisions:

EPC Art. 100(b), 83, 56

Keyword:

Sufficiency of disclosure - (yes)
Inventive step - (yes)

Decisions cited:

T 0987/16

Catchword:



Beschwerdekammern

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Chambres de recours

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Case Number: T 1564/20 - 3.2.01

D E C I S I O N
of Technical Board of Appeal 3.2.01
of 31 August 2022

Appellant: COGEBI Société Anonyme
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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
14 May 2020 concerning maintenance of the
European Patent No. 2421750 in amended form.**

Composition of the Board:

Chairman G. Pricolo
Members: S. Mangin
 P. Guntz

Summary of Facts and Submissions

- I. European patent No. 2 421 750 was maintained as granted by the decision of the opposition division dated 22 February 2016. Against this decision an appeal was lodged by opponents 1 and 2 (appellant 1 and 2 respectively), which led to decision T 987/16 dated 20 February 2019.
- II. In T 987/16 the Board decided:
- that the subject-matter of claim 1 of the main request was sufficiently disclosed;
 - that the subject-matter of claim 1 was novel over D1 (WO 02/32663); but
 - that the subject-matter of claim 1 did not involve an inventive step starting from D2 (US 2003/0170418) in view of the skilled person's common capabilities and knowledge or in view of D1; and
 - to remit the case to the opposition division to deal with the auxiliary requests.
- III. In the subsequent proceedings before the opposition division, the proprietor made auxiliary request 1 filed on 18 November 2016 their main request. The patent was then maintained in amended form on the basis of the main request with the interlocutory decision dated 14 May 2020. In this decision, the opposition division held that the subject-matter of claims 1 and 7 involved an inventive step starting from D2.
- IV. Both appellants 1 and 2 filed an appeal, on 14 July 2020 and 10 July 2020 respectively, against this interlocutory decision.

- V. In their statements of grounds of appeal, appellant 1 (opponent 1) argued on insufficiency of disclosure (Article 100(b) EPC) and lack of inventive step in view of D2 (Articles 100(a) and 56 EPC), as regards the patent as maintained and appellant 2 (opponent 2) argued on lack of inventive step starting from document D2 in combination with the skilled person's common general knowledge or in combination with D1.
- VI. In its communication pursuant to Article 15(1) RPBA 2020 dated 9 February 2022 the Board expressed a preliminary opinion according to which, regardless of whether the objection of insufficiency of disclosure could be considered by the Board in view of previous decision T 987/16 which might apply and be binding also for the present appeal, the objection of insufficiency of disclosure was neither admissible under Article 12(4) RPBA 2020 nor convincing. Furthermore, the Board considered that the subject-matter of claims 1 and 7 involved an inventive step starting from D2 as closest prior art.
- VII. With letter of 19 April 2022, appellant 1 withdrew their request for an oral proceeding and announced that they would not attend the oral proceedings scheduled on 1 June 2022. With letter of 3 May 2022, appellant 2 withdrew their appeal. The Board then decided to cancel the oral proceeding and continue the proceedings in writing.
- VIII. The final requests of the parties resulting from their written submissions are the following:
- Appellant 1 (opponent 1) requests that the appealed decision be set aside and the patent revoked.

Opponent 2, who following the withdrawal of the appeal is no longer appellant but party as of right, requested with the statement of grounds of appeal that the appealed decision be set aside and the patent revoked.

The respondent (proprietor) requests the dismissal of the appeal and the maintenance of the patent in the form allowed by the opposition division as a main request, alternatively that the patent be maintained on the basis of one of auxiliary requests 1-33 filed with the reply to the statements of grounds of appeal.

IX. Independent claim 1 of the main request with the feature numbering used in the appealed decision reads as follows:

1. A composite laminate comprising in order
(a) a polymeric moisture barrier having a thickness from 6.0 to 25.0 micrometers and a UL 94 flame classification of V-0,
(b) an inorganic platelet layer having a thickness from 7.0 to 76.0 micrometers and a UL 94 flame classification of V-0 wherein the platelets comprising the platelet layer have an aspect ratio of from 100 to 20,000, and
(c) a thermoplastic film layer having a thickness no greater than 10 micrometers, an average elongation to break no greater than 150% and a UL 94 flame classification of V-0.

X. Independent claim 7 with the feature numbering used in the appealed decision reads as follows:

7. A thermal insulation and acoustic blanket comprising
(a) an inorganic or organic core having a self extinguishing time no greater than 10 seconds and a

maximum burn length of no greater than 102 mm when tested in accordance with BSS7230 Method F1.

(b) a composite laminate surrounding the core material the laminate further comprising

(1) a polymeric moisture barrier having a thickness from 6.0 to 25.0 micrometers and a UL 94 flame classification of V-0,

(2) an inorganic platelet layer having a thickness from 7.0 to 76.0 micrometers and a UL 94 flame classification of V-0 wherein the platelets comprising the platelet layer have an aspect ratio of from 100 to 20,000, and

(3) a thermoplastic film layer having a thickness no greater than 10 micrometers, an average elongation to break no greater than 150% and a UL 94 flame classification of V-0,

wherein the thermoplastic film layer of the composite laminate contacts and encapsulates the core.

XI. Claims 1 and 7 of the main request of the present appeal differ from claims 1 and 7 of the main request of the appeal case T 987/16 in the thickness of the thermoplastic film layer having been limited from no greater than 25 micrometers to "no greater than 10 micrometers".

Reasons for the Decision

1. Following the preliminary opinion of the Board, the parties did not make any substantive submissions. The Board therefore confirms its preliminary opinion set forth in its communication pursuant to Article 15(1) RPBA 2020.

2. Insufficiency of disclosure - Article 100(b) EPC

The invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

2.1 Appellant 1 was of the opinion that if the lack of commercial availability of the 10 micrometers polyvinylfluoride (PVF) film (PVF Tedlar™ films are all thicker) rendered claim 1 inventive, then the skilled person would not know how to produce such a film in the absence of guidance in the description of the contested patent. As a result, the invention would not be disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art.

2.2 The Board does not agree. As mentioned by the respondent, the fact that a 10 micrometers PVF Tedlar™ film is not commercially available does not prove that the skilled person is not able to prepare a thermoplastic film layer (c) exhibiting a thickness no greater than 10 micrometers. Moreover, the patent discloses two examples with a 6.0 micrometer thick film layer of PEKK having an average elongation at break of 120%, which enables the skilled person to carry out the invention.

2.3 Under these circumstances, the following issues can be left open as they will not change the decision:

- the issue of whether the findings on sufficiency of disclosure in previous decision T 987/16 apply, and is binding for the present appeal; and
- the issue of the admissibility of the objection of insufficiency of disclosure under Article 12(4) RPBA 2020 submitted for the first time with the statement of grounds of appeal.

3. Main request - Inventive step - Article 56 EPC

The subject-matter of claim 1 involves an inventive step starting from D2 as closest prior art.

3.1 As pointed out in decision T 987/16 (reasons, point 4) D2, example 2, discloses a composite material having the layers (a) and (b).

The subject-matter of claim 1 differs from the example 2 of D2 in the layer (c): *"a thermoplastic film layer having a thickness no greater than 10 micrometers, an average elongation to break no greater than 150% and a UL 94 flame classification of V-0"*.

3.2 As mentioned by the party as of right (opponent 2), the problem to be solved may be regarded as the provision of a composite laminate, allowing the bonding of the laminate with another laminate, having reduced thickness and weight while exhibiting improved flame resistant properties.

3.3 The appellant and the party as of right (opponent 2) are of the opinion that the person skilled in the art is encouraged, for making a bond with another laminate, to make this bond with a layer c) in the form of a film. In line with the findings of the Board in T 987/16 (reasons, point 4), the person skilled in the art would be encouraged to choose for layer c) a thermoplastic film of the type used for layer a) of example 2 of document D2.

Both the appellant and the party as of right (opponent 2) argue that in order to limit the increase in weight linked to the presence of this third layer, the person skilled in the art would reduce its thickness as

compared to the thickness of thermoplastic film used for layer a) of example 2 of document D2.

The thickness of layer b) is already minimized. The person skilled in the art would therefore have had no incentive to further reduce the thickness of this layer b) as defined in example 2 of D2, at the risk to see its required properties affected (mechanical, fire resistance, etc.) and affecting the composite laminate as a whole.

Therefore, the person skilled in the art would have concentrated on optimizing the other layers and would have selected, without any inventive step, a PVF film that was as light as possible and retained, in particular, the required mechanical characteristics (as clearly indicated in D2, paragraph [0005] or in D1, page 8, lines 11-25). Such an approach would therefore necessarily have led the person skilled in the art towards the claimed solution, by providing a layer c) and advantageously also a layer a) of thickness adapted for this purpose, i.e. between 6 and 10 microns for example. And a PVF film of such thickness and meeting the requirements was commercially available on the effective date of the opposing patent (see page 2, line 55 to page 3, line 1, a Tedlar® which is a PVF, see example 2 of D2, being cited as a possible option to meet the requirements).

- 3.4 The Board does not agree. Neither D2 nor D1 suggests the skilled person to add a thermoplastic film having a thickness no greater than 10 micrometers, an average elongation to break no greater than 150% and a UL 94 flame classification of V-0.

The arguments of the appellant and of the party as of right are based on an ex-post facto analysis. Indeed, as argued by the respondent and the opposition division, a number of selections need to be made to arrive at the subject-matter of claim 1 that are neither obvious for the skilled person nor suggested by D2 or D1: *"The skilled man starting from Example 2 of D2 must first choose to apply a third layer, secondly select a film layer rather than a fabric support, thirdly decide to reduce the thickness of this layer to a maximum of 10 microns and fourthly opt to specify an average elongation at break and UL 94 flame retardancy for this film layer"* (second paragraph on page 8 of the appealed decision).

Furthermore, while it might be obvious for the skilled person starting from example 2 of D2 to add the same polymeric film as the first layer, arriving at a symmetrical composite structure, nowhere is it suggested to reduce the thickness of the third layer (the thermoplastic film) alone or of the first and the third layer to reduce the weight of the composite structure. Reducing the weight of the composite material as a whole may be obvious for the skilled person, but several possible measures may be taken, not limited to reducing the basis weight of the thermoplastic film. Again, a reduction of the thickness of the thermoplastic film would be based on hindsight. Actually, if the aim is to reduce the thickness and weight of the composite laminate, starting from the example 2 of D2, the skilled person would not add an extra thermoplastic layer.

Finally, D1 discloses a thermoplastic film having a thickness between 12 and 125 micrometers, preferably between 12 and 50 micrometers, and most preferably

between 19 and 25 micrometers (see D1, page 8, lines 26 - page 9, line 2). D1 does not suggest a thermoplastic film having a thickness of no greater than 10 micrometers. The combination of D2 with D1 would not lead to the subject-matter of claim 1. D2 also does not contain a hint to go beyond the limit of 12 micrometers, since the preferred range has its lower limit at 19 micrometers.

3.5 The subject-matter of claim 7 comprising the composite laminate of claim 1 involves an inventive step starting from D2 for the same reasons as for the subject-matter of claim 1.

4. Finally, as opponent 2 withdrew their appeal after expiry of the period of one month of notification of the communication issued by the Board in preparation for oral proceedings, they are entitled to a reimbursement of the appeal fee at 25% in accordance with Rule 103(4)(a) EPC, as correctly noted in their letter dated 3 May 2022.

Order

For these reasons it is decided that:

1. The appeal is dismissed.
2. The appeal fee paid by opponent 2 is reimbursed at 25%.

The Registrar:

The Chairman:



A. Vottner

G. Pricolo

Decision electronically authenticated