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**Datasheet for the decision
of 15 September 2025**

Case Number: T 0676/23 - 3.3.05

Application Number: 07716975.3

Publication Number: 2108006

IPC: C03C25/00

Language of the proceedings: EN

Title of invention:

BINDERS AND MATERIALS MADE THEREWITH

Patent Proprietor:

Knauf Insulation GmbH

Opponents:

Saint-Gobain Isover
STM Technologies S.r.l.

Headword:

Binders/KNAUF

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

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

Decisions cited:

Catchword:



Beschwerdekammern
Boards of Appeal
Chambres de recours

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Case Number: T 0676/23 - 3.3.05

D E C I S I O N
of Technical Board of Appeal 3.3.05
of 15 September 2025

Appellant 1: Saint-Gobain Isover
(Opponent 1) Tour Saint-Gobain
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Appellant 2: STM Technologies S.r.l.
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Respondent: Knauf Insulation GmbH
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 10 February
2023 rejecting the opposition filed against
European patent No. 2108006 pursuant to Article
101(2) EPC.**

Composition of the Board:

Chairman J.M. Schwaller
Members: T. Burkhardt
 S. Fernández de Córdoba

Summary of Facts and Submissions

I. The appeals by opponents 1 and 2 (appellants 1 and 2) are against the opposition division's decision to reject the oppositions against European patent No. 2 108 006 B1, of which independent claim 1 (main request) reads as follows:

"1. A fiberglass insulation material comprising glass fibers present in the range from 75% to 99% by weight, the glass fibers being held together by a cured binder obtained by contacting the fibers with a thermally-curable, aqueous binder comprising binder reactants and curing the binder in contact with the glass fibers, in which:

*- the binder reactants consist of Maillard reactants;
- the glass fibers are held together by at least one Maillard reaction product of the cured binder, the at least one Maillard reaction product being a reaction product of i) a carbohydrate reactant which include one or more reactants having one or more reducing sugars and ii) an amine reactant; and*

wherein the material has a density in a range from 12 kg/m³ (0.75 lbs/ft³) to 48 kg/m³ (3 lbs/ft³)."

II. With their grounds of appeal, the appellants reiterated, inter alia, their objections under Article 123(2) EPC against claim 1 as granted.

III. With its reply contesting this objection, the patent proprietor (respondent) resubmitted auxiliary request 1 filed during the opposition proceedings. Independent claims 1 and 2 of this request differ from claim 1 of the main request in that the density range was restricted to *"from 12 kg/m³ (0.75 lbs/ft³) to 40 kg/m³*

(2.5 lbs/ft³)" and "from 24 kg/m³ (1.5 lbs/ft³) to 48 kg/m³ (3 lbs/ft³)", respectively.

- IV. The board issued a preliminary opinion under Article 15(1) RPBA, indicating that none of the claim requests then on file appeared to meet the requirements of Article 123(2) EPC.
- V. At the oral proceedings, which took place on 15 September 2025, the final requests of the parties were as follows.

The appellants requested that the decision be set aside and that the patent be revoked.

The respondent requested that the appeals be dismissed or, as an auxiliary measure, that the patent be maintained in amended form on the basis of auxiliary request 1 submitted during opposition proceedings and resubmitted with the reply to the grounds of appeal.

Reasons for the Decision

Main request: Article 123(2) EPC

1. Claim 1 requires that the binder reactants contained in the binder of the fibreglass insulation material *consist of* Maillard reactants. For the reasons set out below, the feature "consist of" is not directly and unambiguously derivable from the application as filed, and so infringes Article 123(2) EPC.
2. While the respondent has not disputed that there was no literal basis for this feature in the application as filed, it argued that it was directly and unambiguously derivable from the application as filed for the skilled

person, who was a technician in the field of binder chemistry, and referred in particular to the following passages of the application as filed:

- page 3, lines 4 to 14
- page 4, lines 23 to 26
- page 15, lines 16 to 27 with reference to Figure 1
- page 22, lines 9 to 17
- page 80, lines 9 to 11

2.1 This is not convincing for the board, because the expressions: "[t]he Maillard reactants [...] *may include*" on page 3, line 10, or "[t]he aforementioned Maillard reactants may be combined to make an aqueous composition that *includes*" (emphases added by the board) on page 22, line 10, make clear that the additional presence of reactants which are not Maillard reactants is indeed envisaged in the application as filed.

This is further confirmed by the passage on page 22, lines 15 to 17 as filed, which indicates that the Maillard reactants may additionally include "a non-carbohydrate polyhydroxy reactant" (see also page 20, lines 24 to 25, as well as Table 7). Similarly, page 3, lines 23 to 29, indicates the possible use of "a non-carbohydrate carbonyl reactant", and neither non-carbohydrate polyhydroxy reactants nor non-carbohydrate carbonyl reactants are Maillard reactants. This has not been contested.

2.2 Furthermore the general disclosure and numerous examples of the application as filed explicitly specify that the binder contains reactants that can be construed as "binder reactants" and that are *not* Maillard reactants, for instance a "silicon-containing coupling agent".

In particular, the passage on page 82, lines 4 to 7, states that "[e]xamples of the *binder reactants* [...] include (i) the polycarboxylic acid reactant, (ii) the amine base, (iii) the carbohydrate reactant, (iv) the non-carbohydrate polyhydroxy reactant, (v) *the silicon-containing coupling agent*, and (vi) the corrosion inhibitor compound" (emphasis added by the board), and in accordance with this statement, the binders of numerous examples of the application as filed contain a coupling agent in the form of a silane component, namely Silquest A-1101.

2.3 The respondent contested that the coupling agent was a binder reactant. Rather, it was an additive that ensured adhesion between the glass fibres and the binder and, in contrast to the carbohydrate and the amine reactants, it had no influence on the polymeric structure of the binder. The skilled person, who was a technician in the field of binder chemistry, would understand the difference between these components from the disclosure of the application as filed taken as a whole. The respondent referred in this respect to page 80, line 9, to page 81, line 4 as filed.

2.4 The board disagrees because a coupling agent in the form of a silane compound is manifestly a reactant, and since claim 1 as granted does not indicate that reactant binders are only those reactants that modify the polymeric structure of the binder, the coupling agent can be construed as a binder reactant within the meaning of claim 1. This is by the way confirmed by the above cited passage on page 82. The other passages cited by the respondent, e.g. on page 80, lines 9 to 11, do not contradict this interpretation.

- 2.5 The respondent further argued that a board should not overturn a decision in a case such as the one at hand, where the opposition division had correctly considered the law and the facts, but had come to a different conclusion due to subjectivity.
- 2.6 This argument cannot be accepted by the board, because the primary purpose of the appeal proceedings is the review of the decision under appeal in a judicial manner (Article 12(2) RPBA), and this does not mean that a first-instance conclusion, in which the department of first instance considered the correct legal provisions and the correct facts, should not be overturned.
3. It follows from the above considerations that the subject-matter of claim 1 as granted does not derive directly and unambiguously from the application as filed and thus extends beyond the disclosure of the application as originally filed (Article 123(2) EPC).

Auxiliary request 1: Article 123(2) EPC

4. The same reasoning applies to this request, which has not been contested by the respondent. Therefore, this request also fails under Article 123(2) EPC.

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:



A. Wille

J.M. Schwaller

Decision electronically authenticated