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**Datasheet for the decision  
of 19 April 2016**

**Case Number:** T 1992/13 - 3.3.09

**Application Number:** 06792682.4

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C08J7/04, C08L83/06

**Language of the proceedings:** EN

**Title of invention:**  
ADHESIVE FOR NONCERAMIC FLOOR COVERINGS

**Patent Proprietor:**  
BASF SE

**Opponent:**  
Celanese Emulsions GmbH

**Headword:**

**Relevant legal provisions:**  
RPBA Art. 13(1)  
EPC Art. 56

**Keyword:**

Late-filed documents - admitted (no)

Main request: inventive step - (no)

Late-filed auxiliary request - admitted (no)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern**  
**Boards of Appeal**  
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Case Number: T 1992/13 - 3.3.09

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.09**  
**of 19 April 2016**

**Appellant:** Celanese Emulsions GmbH  
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**Respondent:** BASF SE  
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**Representative:** BASF IP Association  
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**Decision under appeal:** Interlocutory decision of the Opposition  
Division of the European Patent Office posted on  
8 July 2013 maintaining European patent No.  
1919332 in amended form.

**Composition of the Board:**

**Chairman** W. Sieber  
**Members:** J. Jardón Álvarez  
D. Prietzel-Funk

## Summary of Facts and Submissions

- I. This decision concerns the appeal filed by the opponent against the interlocutory decision of the opposition division that European patent No. 1 919 332, as amended, met the requirements of the EPC.
- II. The opponent had requested revocation of the patent in its entirety on the grounds of Article 100(a) EPC, namely lack of novelty and inventive step.

The documents cited during the opposition proceedings included:

- D1: ®Mowilith LDM 1355 technical data sheet, November 2000 (2 pages);
- D3: Manufacturing procedure for product LDM 1355, 3 March 1998 (1 page); and
- D4: "Celluloseether & Polymerisate. Haftende Verbindungen. Mowilith® Dispersionen Klebstoffe für technische Anwendungen", Clariant brochure, October 2000 (12 pages).

- III. The opposition division maintained the patent in amended form on the basis of claims 1 to 16 filed by letter dated 1 March 2012 as the main (and only) request. Claim 1 read as follows:

"1. Process for bonding non ceramic floor coverings to a substrate, wherein an aqueous adhesive is used, which comprises a synthetic polymer as a binder and wherein the adhesive comprises hydrolyzable silane groups and wherein the polymer is synthesized from at least 40% by weight of principal monomers selected from C1 to C20

alkyl(meth)acrylates, vinylaromatics having up to 20 carbon atoms, ethylenically unsaturated nitriles, vinyl halides, vinyl ethers of alcohols comprising 1 to 10 carbon atoms, aliphatic hydrocarbons having 2 to 8 carbon atoms and one or two double bonds, or mixtures of these monomers."

Claims 2 to 16 were dependent claims.

IV. The opposition division's decision can be summarized as follows:

- The amendments fulfilled the requirements of Articles 123(2) and (3) EPC.
- The claimed subject-matter was novel over the disclosures of D1, D3' (D3 supplemented with the information provided by the opponent by letter of 26 April 2013), and D4.
- The claimed subject-matter involved an inventive step starting from D1 as closest prior art. The technical problem to be solved was the provision of an alternative process for bonding non-ceramic floor coverings to a substrate. The claimed solution involved an inventive step because the prior art failed to provide an incentive to replace the vinyl acetate based polymers of D1 by polymers synthesised from at least 40% of principal monomers as defined in claim 1.

V. On 11 September 2013, the opponent (in the following: the appellant) lodged an appeal against this decision. The statement setting out the grounds of appeal was filed on 30 October 2013 and included the following documents:

D6: "Wäßrige Polymerdispersionen. Synthese, Eigenschaften, Anwendungen", edited by D. Distler, Wiley-VCH Verlag GmbH, Weinheim, 1999, pages 150 to 153; and

D7: Technical Information Acronal<sup>®</sup> A 323, BASF September 2002 (4 pages).

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

VI. In its reply, dated 18 March 2014, the patent proprietor (in the following: the respondent) requested that the appeal be dismissed and that documents D6 and D7 not be admitted into the proceedings.

VII. By letter dated 24 September 2015, the appellant filed further arguments and the following documents:

D8: WO 00/26263 A1;

D9: GB 1 407 827 A;

D10: JP 2004 115780 A; and

D10a: English translation of D10.

VIII. In a communication dated 3 November 2015, the board indicated the points to be discussed during the scheduled oral proceedings.

IX. On 19 February 2016, the respondent filed further arguments and requested that documents D8 to D10 not be

admitted into the appeal proceedings. On 15 April 2016, it filed a set of claims for a first auxiliary request.

- X. On 19 April 2016, oral proceedings were held before the board. During the oral proceedings the respondent withdrew its request not to admit documents D6 and D7 into the proceedings and replaced the first auxiliary request filed on 15 April 2016 by a new first auxiliary request (in the following: the auxiliary request).

The claims of the main request are the claims before the opposition division (see point III above).

Claim 1 of the auxiliary request as filed during the oral proceedings reads as follows (amendments over main request in bold):

"1. Process for bonding non ceramic floor coverings to a substrate, wherein an aqueous adhesive is used, which comprises a synthetic polymer as a binder and wherein the adhesive comprises hydrolyzable silane groups and wherein the **binder consists of a polymer which** is synthesized from at least 40% by weight of principal monomers selected from C1 to C20 alkyl(meth)acrylates, vinylaromatics having up to 20 carbon atoms, ethylenically unsaturated nitriles, vinyl halides, vinyl ethers of alcohols comprising 1 to 10 carbon atoms, aliphatic hydrocarbons having 2 to 8 carbon atoms and one or two double bonds, or mixtures of these monomers."

- XI. The arguments of the appellant, insofar as they are relevant for the present decision, may be summarised as follows:

- D8 to D10 should be admitted into the proceedings because they were *prima facie* highly relevant for the assessment of patentability; they did not raise any new complex technical or legal issues and they could have been identified only by extensive additional prior-art searches.
- Starting from D1 as closest prior art, the subject-matter of claim 1 of the main request lacked inventive step because it would have been obvious for the skilled person either to blend <sup>®</sup>Mowilith LDM 1355 with other polymer dispersions, such as polyacrylate dispersions known from D6 or D7, or to replace it by such other known polymer dispersions.
- The auxiliary request should not be admitted into the proceedings as it had been filed too late, was in scope identical to the main request and/or it was not supported by the application as filed.

XII. The relevant arguments of the respondent may be summarised as follows:

- D8 to D10 should not be admitted into the proceedings because they have been filed too late and were not relevant for the claimed subject-matter.
- The claimed subject-matter involved an inventive step. The scope of claim 1 of the main request was limited to the use of the polymers recited in the claim and excluded the presence of vinyl acetate polymers disclosed in D1. Neither D1 nor the other documents cited suggested the now claimed process.



- The auxiliary request should be admitted into the proceedings because it was filed as a reaction to the finding of the board that the subject-matter of the claims of the main request lacked inventive step. The amendment made aimed to overcome the objection and to ensure that the claim only covered the polymers therein recited as binder.

XIII. The appellant requested that the decision under appeal be set aside and that the patent be revoked in its entirety.

XIV. The respondent requested that the appeal be dismissed (main request) or, alternatively, that the patent be maintained on the basis of claims 1 to 16 of the auxiliary request filed on 19 April 2016 during the oral proceedings.

## **Reasons for the Decision**

### *1. Admission of late-filed documents*

1.1 Documents D8, D9 and D10/D10a were submitted by the appellant by letter dated 24 September 2015, that is to say, nearly two years after it had filed its statement setting out the grounds of appeal. These documents were used to raise new attacks on novelty and inventive step. As to the reasons for filing them at such a late stage in the proceedings, the appellant argued that they were *prima facie* highly relevant for the assessment of patentability, that they did not raise any new complex technical or legal issues and that they could have been identified only by extensive additional prior-art searches.

- 1.2 The filing of these documents has led to an amendment to the appellant's case, which may be admitted and considered at the board's discretion, in accordance with Article 114(2) EPC and Article 13(1) RPBA. The discretion shall be exercised in view of inter alia the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy. Their *prima facie* relevance may also be taken into account.
  
- 1.3 Concerning the relevance of the new evidence, the appellant maintained that the documents were novelty destroying for the subject-matter of claim 1 of the main request and that the claimed subject-matter lacked inventive step starting from D8 or D9 as closest prior art.
  
- 1.4 Document D8
  - 1.4.1 D8 relates to a redispersible material mainly in the form of powder containing a polymer comprising protected silanol groups (see abstract and claim 1). The redispersible material may consist of a powder, an aqueous dispersion, or solution. It may be used in composite and coating mortars, cement dyes and adhesives, particularly in cement-free mortars, gypsum mortars, primers, plasters, carpet, wood, powder and floor adhesives (see page 10, lines 18 to 24). The polymer used is defined in broad terms and includes homopolymers, copolymers, block polymers, graft polymers and oligomers, no restriction being made as long as the polymer contains silanol groups (see page 6, lines 5 to 18). In examples 8 and 14 the adhesives are applied to ceramic floors.

1.4.2 In order to arrive at an embodiment falling within the scope of claim 1 of the main request, a multiple selection from the teaching of D8 has to be made. In particular, it is necessary to make at least the following selections:

- select a polymer as defined in claim 1 from the long list of polymers disclosed on page 6, lines 5 to 18;
- select its use for non-ceramic floor coverings from the list of possible uses on page 10, lines 18 to 24; and
- select its use in aqueous form, that is to say not as a powder (see page 10, lines 17 to 18).

1.4.3 Such a multiple selection is disclosed nowhere in D8. The claimed combination is neither explicitly disclosed nor implicitly hinted at in D8, and is therefore not directly and unambiguously derivable from it.

1.5 Document D9

1.5.1 D9 relates to a process for the manufacture of stable coagulate-free aqueous vinyl polymer dispersions having an improved adhesion (page 1, lines 27 to 30). The polymers comprise a hydrolysable silane and the monomers are selected from vinyl esters of carboxylic acids having from 2 to 18 carbon atoms, (meth)acrylic acid esters of alcohols having from 1 to 18 carbon atoms or from a mixture of styrene and up to 40% by weight of butadiene (page 1, lines 30 to 60). In all working examples vinyl acetate or vinyl propionate are used.

The dispersions may be used as structural adhesives, which can be employed for gluing the most diverse materials including not only inorganic materials such as ceramic, stoneware, glass tiles, etc., but also organic materials, such as polystyrene foam, polystyrene and polyvinyl chloride sheets or tiles and polyurethane foam or polyester tiles (see paragraph bridging pages 4 and 5).

1.5.2 As with D8, to arrive at an embodiment falling within the scope of claim 1, several selections (specific polymer, specific use for non-ceramic floor) within the broad teaching of D9 would have to be made. The claimed combination is thus not directly and unambiguously derivable from D9.

1.6 Document D10/D10a

1.6.1 D10/D10a relates to a curable composition comprising a polymer having a hydrolysable silicon-containing functional group, a tackifier, an acrylic polymer and a curing catalyst (see claim 1 of D10a). It can be used *inter alia* to provide adhesion between wood flooring and concrete and cement (see paragraph [0043]).

1.6.2 However, as pointed out by the respondent, the adhesives of D10/D10a are not aqueous adhesives as required by claim 1 of the patent. They are prepared by melting the mixture by heating (see working example). The disclosure of D10 is not relevant for the claimed subject-matter.

1.7 In summary, none of the late-filed documents D8, D9 and/or D10/D10a anticipates the subject-matter of claim 1. They can therefore not be regarded as *prima facie* highly relevant for novelty.

- 1.8 The appellant further argued that both D8 and D9 would be highly relevant for inventive step. These documents would demonstrate that aqueous adhesive compositions comprising a synthetic polymer with hydrolysable silane groups were generally known to the person skilled in the art for bonding non-ceramic substrates. However, it is not apparent why this new inventive step objection is more relevant than the objection brought forward with the statement of grounds of appeal.
- 1.9 The new documents also give rise to new issues, in particular with respect to inventive step, to be discussed for the first time at a late state in the appeal proceedings. These issues might not be as simple as alleged by the appellant. Thus, the need for procedural economy also speaks against the admission of these documents.
- 1.10 In view of that, the board decided to exercise its discretion according to Article 13(1) RPBA not to admit documents D8, D9 and D10/D10a into the proceedings.

#### MAIN REQUEST

#### 2. *Inventive step*

2.1 The invention relates to a process for bonding non-ceramic floor coverings to a substrate using an aqueous adhesive, which comprises a synthetic polymer as a binder and hydrolysable silane groups. In particular, claim 1 reads in the form of a feature analyse:

- (a) process for bonding non-ceramic floor coverings to a substrate,
- (b) wherein an aqueous adhesive is used,

- (b1) which comprises a synthetic polymer as a binder,  
and
- (b2) wherein the adhesive comprises hydrolysable  
silane groups and
- (b3) wherein the polymer is synthesized from at least  
40% by weight of principal monomers selected from  
C1 to C20 alkyl(meth)acrylates, vinylaromatics  
having up to 20 carbon atoms, ethylenically  
unsaturated nitriles, vinyl halides, vinyl ethers  
of alcohols comprising 1 to 10 carbon atoms,  
aliphatic hydrocarbons having 2 to 8 carbon atoms  
and one or two double bonds, or mixtures of these  
monomers.

2.2 It might be worth mentioning at this juncture that  
claim 1 is drafted in an "open" way. Thus feature (b1)  
reads:

"which comprises a synthetic polymer as a binder".

This formulation does not in any way limit the subject-  
matter of the claim to the use of (only) the binder  
synthesized from the monomers recited in feature (b3).  
On the contrary, the use of the indefinite article ("a  
binder") and of the word "comprises" clearly indicates  
that other binders are envisaged within the scope of  
the claim.

2.3 Furthermore, claim 1 does not require that the  
hydrolysable silane groups form part of the binder  
polymer synthesized from at least 40% by weight of the  
principal monomers of feature (b3). According to  
paragraph [0058] of the specification, the hydrolysable  
silane group may be bonded to the above synthetic  
polymer itself and alternatively, it may comprise a  
further additive with hydrolysable silane groups. Thus,

claim 1 covers, for example, a blend of binder polymers, wherein one binder polymer is synthesized from the monomers recited in (b3) and another binder polymer (not according to (b3)) but containing the hydrolysable groups.

2.4 Closest prior art

2.4.1 D1 is directed to the use of an aqueous dispersion of a polymer based on vinyl acetate for bonding non-ceramic floor coverings to a substrate, and undisputedly represents the closest prior art.

2.4.2 It describes the product <sup>®</sup>Mowilith LDM 1355 (in the following: <sup>®</sup>Mowilith), a non-plasticized aqueous dispersion based on vinyl acetate, ethylene and <sup>®</sup>Veova (see page 1 under "Characteristics").

Although D1 fails to disclose hydrolysable silane groups and the amounts of the various monomer moieties in the binder polymer, this missing information is provided in D3 (supplemented by the information in the letter of the opponent dated 26 April 2013) wherein the manufacturing procedure for <sup>®</sup>Mowilith is described.

From this, it can be seen that <sup>®</sup>Mowilith is a copolymer having vinyl esters as main monomers (about 84% by weight, referring to total monomer content) with a minor amount of ethylene (about 15% by weight, referring to total monomer content) and small amounts of Silan A 174 (methacryloyloxypropyltrimethoxysilane) and 2-hydroxyethylmethacrylate.

<sup>®</sup>Mowilith is particularly suitable as binder for compounding flooring adhesives to bond PVC, linoleum, cork, and textile based coverings with different

backings (see D1, page 2, left column under "Applications", lines 1 to 4).

- 2.4.3 The process of claim 1 differs from the disclosure of D1 essentially by the use as a binder of a polymer synthesized from a principal monomer selected from the list recited in feature (b3), instead of the vinyl ester used in D1.
  
- 2.5 Problem to be solved and its solution
  - 2.5.1 There is no evidence on file showing any advantage of the adhesives now used over those of D1. The experimental results in the patent merely show the advantageous properties of the claimed adhesives over adhesives without hydrolysable silane groups (see page 14, performance testing) but not over the adhesives of D1 already having hydrolysable silane groups.
  
  - 2.5.2 The technical problem underlying the patent in suit can therefore be seen in the provision of an alternative process for bonding non-ceramic floor coverings to a substrate.
  
  - 2.5.3 The examples in the patent show that this problem is credibly solved by the claimed process using as a binder a polymer as defined in feature (b3). This finding was not contested by the appellant, and the board too, is satisfied that this problem has been credibly solved.
  
- 2.6 Obviousness
  - 2.6.1 It remains to be decided whether, in view of the available prior art, it would have been obvious for the



skilled person to solve this technical problem by the means claimed.

2.6.2 The board agrees with the appellant that this is the case because D1 itself suggests the provision of adhesives for non-ceramic floor coverings which contain a blend of <sup>®</sup>Mowilith with other polymer dispersions, including acrylate polymers.

2.6.3 D1 provides the skilled person with a clear motivation to blend <sup>®</sup>Mowilith with other polymers. Thus, on page 2, middle column of D1 under "Processing" it is stated that:

"The copolymer dispersion can be blended and formulated with other polymer dispersions, additives, mineral extenders, solvents, plasticizers, liquid resins, resinous solutions and compounds or with resin dispersions to influence the quality and handling of flooring adhesives."

2.6.4 When applying this teaching the skilled person would turn, for instance, to polyacrylate binders because they are well known in the field as binder polymers for bonding flexible floor coverings, that is to say the same use as the patent (see D6 page 152, first full paragraph, see also third paragraph and recipe using Acronal<sup>®</sup> A 323, an aqueous dispersion of an acrylic ester copolymer comprising units derived from acrylonitrile).

2.6.5 The respondent did not dispute that blends of <sup>®</sup>Mowilith with other polymer dispersions would be suggested in D1, but maintained that the claimed subject-matter involved an inventive step over D1 because such blends were not within the scope of claim 1. In its view,

polymers synthesized from vinyl esters of carboxylic acids as in <sup>®</sup>Mowilith of D1 were not covered by the claim.

- 2.6.6 The board cannot accept this argument. As explained in point 2.2 above, claim 1 is drafted in an "open" way which includes the possibility of binder polymer blends.

The board also cannot accept the respondent's further interpretation of claim 1 that claim 1 included binder polymer blends, but in that case all the binder polymers would have to be synthesized from a monomer as recited in feature (b3). There is no basis for such a limited interpretation of the scope of the claim. As explained above, the subject-matter of claim 1 covers the possibility of using a further binder and this binder is not limited at all.

- 2.6.7 For these reasons, the subject-matter of claim 1 of the main request lacks inventive step and the request is not allowable.

#### AUXILIARY REQUEST

### 3. *Admission*

- 3.1 The auxiliary request was filed during the oral proceedings after the board had concluded that the main request was not allowable, i.e. at the very last moment.

- 3.2 The respondent justified the late filing as being a reaction to the negative finding of the board that the main request lacked inventive step due to the fact that

the subject-matter of claim 1 covered blends of polymer dispersions.

3.3 First of all, it should be noted that the amendment is under no circumstances the reaction to a new development in the appeal proceedings. The appellant's inventive step objection in the statement of grounds of appeal was based on the obvious use of binder blends.

3.4 Leaving this aspect aside, the amendment is not suitable to overcome the inventive step objection.

Compared to claim 1 of the main request (see point 2.1 above), the only amendment made concerns feature (b3) that now reads (deletions over claim 1 of the main request struck through; and additions in bold):

(b3) wherein ~~the polymer~~ **the binder consists of a polymer which** is synthesized from at least 40% by weight of principal monomers selected from ...

3.5 However, it has to be born in mind that the antecedent for the amendment is still the same, namely "which comprises a synthetic polymer as a binder". Thus, claim 1 merely requires the presence of a specific synthetic polymer, which has the function of a binder. As set out in points 2.2 and 2.6.6 above, this wording cannot be interpreted in the way that the adhesive used in claim 1 contains only a binder polymer or a blend of binder polymers synthesized from at least 40% of the principal monomers listed in (b3).

In view of the wording of the antecedent, "the binder" introduced by the amendment can only refer to the binder mentioned in the context of the specific synthetic polymer but not to binder/binders in general.

3.6 In summary, the amendment does not overcome the reasons for lack of inventive step of the main request.

3.7 Consequently, the board exercised its discretion not to admit auxiliary request 1 into the proceedings (Article 13(1) RPBA).

## 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:



M. Cañueto Carbajo

W. Sieber

Decision electronically authenticated