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D E C I S I O N
of 4 June 2003

Case Number: T 0303/99 - 3.3.7

Application Number: 92915613.1

Publication Number: 0597895

IPC: C09J 5/00

Language of the proceedings: EN

Title of invention:

Repositionable coated substrate adhesive

Applicant:

MINNESOTA MINING AND MANUFACTURING COMPANY

Opponent:

-

Headword:

-

Relevant legal provisions:

EPC Art. 123(2)

Keyword:

"Amendments - added subject-matter (yes)"

Decisions cited:

-

Catchword:

-



Case Number: T 0303/99 - 3.3.7

D E C I S I O N
of the Technical Board of Appeal 3.3.7
of 4 June 2003

Appellant: MINNESOTA MINING AND MANUFACTURING COMPANY
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 26 October 1998
refusing European patent application
No. 92915613.1 pursuant to Article 97(1) EPC.

Composition of the Board:

Chairman: R. E. Teschemacher
Members: B. J. M. Struif
P. A. Gryczka

Summary of Facts and Submissions

I. European patent application 92 915 613.1, resulting from international application PCT/US92/04914, having an international filing date of 11 June 1992, was published as WO 93/03105. Claim 1 as filed reads as follows.

"A repositionable glue stick comprising:

- a) at least 10 percent by weight of an infusible, non-polar organic liquid dispersible, non-polar organic liquid insoluble, inherently tacky, elastomeric copolymer microsphere, and
- b) a gelling component in an amount sufficient to provide a Penetration Value of less than 40 mm."

Claims 2 to 11 were dependent on claim 1.

Claim 12 reads as follows:

" A method of providing repositionable adhesive on an individual sheet of paper comprising:

- a) applying the adhesive of claim 1 to a paper substrate, and
- b) applying said paper substrate to a receiving surface."

II. The appeal lies against the decision of the examining division to refuse the application in suit in view of *inter alia* the following documents:

D1: JP 2 206 672 (PAJ abstract in English)

D3: US-A-3 691 140

D5: US-A-4 994 322

The decision was based on a set of six claims as the sole request of which amended claim 1 reads as follows:

"A repositonable glue stick comprising:

a) at least 10 % by weight of an infusible, non-polar organic liquid dispersible, nonpolar organic liquid insoluble, inherently tacky, elastomeric, acrylate or methacrylate copolymer solid or hollow microspheres, wherein the solid microspheres are comprised of 90 to 99.5 % by weight of at least one alkyl acrylate and 10 to 0.5 % by weight of at least one monomer selected from the group consisting of substantially oil-insoluble, water-soluble ionic monomers and maleic anhydride, the hollow microspheres are comprised of 70-99 % by weight of at least one alkyl acrylate or methacrylate and 30-1 % by weight of a binder copolymer comprising an elastomeric, polymeric, backbone having pendant high Tg polymeric moieties and having a central cavity that is at least 10 % of the diameter of the microspheres, and the solid or hollow microspheres have diameters in the range of 1 to 250 micrometers,

b) a binder component comprising a (a) polymer or blend of polymers having a high degree of adhesion for the microspheres and present in an amount of up to 26 % by weight, and

c) 6 to 15 % by weight of a gelling agent such that the Penetration Value of the repositionable stick is less than 40 mm."

The decision can be summarized as follows:

- (a) Although the definition of the penetration value in claim 1 was not clear and the term "having pendant high Tg polymeric moieties" was vague, these objections under Article 84 EPC were not the reason for refusal.
- (b) The claimed subject-matter did however not involve an inventive step (Article 56 EPC).

III. On 3 December 1998 the applicant (appellant) filed a notice of appeal against the above decision, the prescribed fee being paid on the same day. In the statement setting out the grounds of appeal filed on 5 March 1999, the appellant submitted an amended set of claims 1 to 14 as the sole request.

Claim 1 reads as follows:

"A repositionable glue stick comprising:

- a) at least 10 % by weight of infusible, nonpolar organic liquid dispersible, nonpolar organic liquid insoluble inherently tacky, elastomeric, acrylate or methacrylate copolymer solid or hollow microspheres, wherein
 - the solid microspheres are comprised of 90 to 99.5 % by weight of at least one alkyl acrylate and 10 to 0.5 % by weight of at least one monomer selected from the group consisting of substantially

oil-insoluble, water-soluble ionic monomers and maleic anhydride,

- the hollow microspheres are comprised of 70-99 % by weight of at least one alkyl acrylate or methacrylate and 30-1 % by weight of a binder copolymer and having a central cavity that is at least 10 % of the diameter of the microspheres,
 - the solid or hollow microspheres having diameters in the range of 1 to 250 micrometers,
- b) a binder component comprising an acrylate polymer and polyvinylpyrrolidone, and
- c) a gelling agent in an amount sufficient to provide a Penetration Value of the repositionable stick less than 40 mm, the Penetration Value being determined by the ASTM Test Method D-5, Penetration of Bituminous Materials."

IV. The appellant argued in substance that according to amended claim 1 the binder component comprising an acrylate polymer and polyvinyl pyrrolidone provided an improved performance. Thus, the subject-matter of amended claim 1 involved an inventive step.

V. In a communication dated 20 March 2003, the board addressed the points to be discussed during the oral proceedings scheduled for 4 June 2003. The board addressed as a main point of discussion, in particular, the basis in the application as originally filed of the following amended features (Article 123(2) EPC):

- "acrylate or methacrylate copolymer... microspheres" (claim 1: page 17, line 7),

- "a binder component comprising an acrylate polymer and polyvinylpyrrolidone" (claim 1: page 17, lines 20 and 21),
 - "having a central cavity that is at least 10 % ... " (claim 1: page 17, line 15),
 - "oil-in-water system" (claim 6),
 - "a pH sensitive color former" (claim 13),
 - the definition of the binder copolymer of claim 1, in which the feature "comprising an elastomeric ... moieties" (page 4, lines 7 and 8), has been omitted.
- VI. By letter of 28 May 2003, the appellant informed the board that he would not be attending oral proceedings.
- VII. The oral proceedings were held on 4 June 2003 in the absence of the appellant in accordance with Rule 71(2) EPC.
- VIII. The appellant requested in writing that the decision under appeal be set aside and that the patent be granted on the basis of the set of claims 1 to 14 submitted with the statement setting out the grounds of appeal as the sole request.

Reasons for the Decision

1. The appeal is admissible

Amendments

2. In the communication dated 20 March 2003, the board addressed possible deficiencies under Article 123(2) EPC, in particular the amendment of the binder copolymer in the hollow microspheres of claim 1, in which the feature "comprising an elastomeric ... moieties" (page 4, lines 7 and 8), has been omitted.

2.1 According to that amendment of claim 1, "the hollow microspheres are comprised of 70-99% by weight of at least one alkyl acrylate or methacrylate and 30-1% by weight of a binder copolymer and having a central cavity that is at least 10% of the diameter of the microspheres". Original claim 3 referring back to original claim 1 only specifies that "said microspheres are hollow", without giving the further definition thereof as now incorporated in claim 1. According to the description as filed, the hollow microsphere adhesives "are repositionable pressure-sensitive adhesives comprising from about 70 percent to about 99 percent hollow, polymeric, acrylate, inherently tacky, infusible, solvent-insoluble, solvent-dispersible, elastomeric microspheres comprising at least one alkyl acrylate or alkyl methacrylate ester, a majority of the microspheres having one or more interior voids having a diameter of at least about 10 percent of the diameter of the microsphere, and correspondingly, from about 30 to about 1 percent percent of a binder copolymer comprising an elastomeric polymeric backbone having pendant high Tg polymeric moieties" (page 3, line 37 to page 4, line 8).

Thus, the hollow microsphere adhesives are defined by a specific combination of elastomeric microspheres and a

specific binder copolymer in a specified weight ratio. Whilst the binder copolymer of the hollow microsphere adhesives is defined in the application as originally filed by a specific type of copolymer which has not only an **elastomeric backbone** but also **pendant high Tg polymeric moieties**, the amended claim 1 is not limited in this respect but comprises any binder copolymer independent of the structure of the backbone or the type of the pending groups (emphasis added). A comparison between the amended features and the above passage of the original description thus reveals that at least two essential characteristics of the binder copolymer have been omitted.

2.2 The only further disclosure of hollow polymeric microspheres is a cross-reference to US-A-4 994 322 (D5, page 4, line 14). The question whether information in the cross-referenced document is to be considered as forming part of the content of the application in suit under the circumstances of the present case, can be left unanswered, since that document does not provide any technical information on which the generalized feature "binder copolymer" could be based.

2.2.1 D5 describes a repositionable pressure sensitive adhesive comprising about 70 to about 99% of

(a) hollow, polymeric, acrylate, inherently tacky, infusible, solvent-insoluble, solvent-dispersible elastomeric microspheres comprising at least one alkyl acrylate or alkyl methacrylate ester, a majority of the microspheres having one or more interior voids having a diameter of at least 10% of the diameter of the microsphere; and

(b) correspondingly, from about 30 to about 1% of a binder copolymer comprising an elastomeric polymeric backbone having pendant therefrom high Tg polymeric moieties (abstract). This definition of the pressure sensitive adhesive is furthermore specified in claim 1 of D5 by the type of repeating monomers in the backbone of the binder copolymer and a specific Tg for the polymeric moiety of greater than 20°C. This definition is consequently in accordance with the definition of the binder copolymer in the application as originally filed.

2.2.2 Hence, the application as filed (page 3, lines 37 to page 4, line 8) and the reference D5 cited therein define the binder copolymer in a more precise manner than the amended claim 1. Furthermore, the original application does not contain any information from which it could be concluded that the specific structural features of the binder copolymer could be omitted.

2.3 Therefore, singling out the amended feature "binder copolymer" from its originally disclosed context by omitting necessary technical features, presents the skilled person with technical information which is not directly and unambiguously derivable from the original disclosure.

2.4 Since claim 1 of the sole request contravenes the requirements of Article 123(2) EPC, other formal or substantive issues also addressed in the above communication by the board need not to be dealt with.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

C. Eickhoff

R. Teschemacher