

A		B	X	C	
---	--	---	---	---	--

File Number: T 381/90 - 3.3.1

Application No.: 85 201 198.0

Publication No.: 0 171 847

Title of invention: Liquid, curable coating composition based on a hydroxyl groups-containing addition polymer as binder

Classification: C09D 3/80

DECISION
of 16 November 1992

Applicant: AKZO N.V.

Opponent: HOECHST AG Werk Kalle-Albert

Headword: Coating composition/AKZO

EPC Article 54

Keyword: "Novelty (no)"
"Selection of a group of compounds"

Summary of Facts and Submissions

- I. The grant of European patent No. 0 171 847 in respect of European patent application No. 85 201 198.0 was announced on 1 June 1988 (cf. Bulletin 88/22). The patent was based on nine claims, Claim 1 reading as follows:

"A liquid, curable coating composition based on a hydroxyl groups-containing addition polymer as binder and a curing agent, characterized in that the addition polymer is a polymer which is partly built up from one or more of the polycyclic monomers isobornyl acrylate, isobornyl methacrylate, monoethylenically unsaturated compounds of decahydronaphthalene and tricyclo[5.2.1.0^{2.6}]decane, as well as their substituted derivatives carrying one or more functional groups, which addition polymer has a number average molecular weight of 600-15000 and a hydroxyl number of 30-320."

Independent Claim 8 concerned a process for coating a substrate by means of the above composition. Independent Claim 9 related to the copolymers for use in the composition of Claim 1.

- II. A notice of opposition was filed on 27 February 1989 by Hoechst AG requesting that the patent be revoked on the ground that its subject-matter did not involve an inventive step. In a further letter received on 9 November 1989, the Opponent also argued that the claimed subject-matter lacked novelty. The opposition was supported by several documents of which only

(4) EP-A-0 056 971

is relevant to this decision.

- III. By a decision dated 30 March 1990 the Opposition Division rejected the opposition.

The Opposition Division held that the subject-matter of the claims was novel because the cited documents did not disclose hydroxyl group-containing polymers built up from one or more of the polycyclic monomers as claimed.

It also held that the subject-matter of the claims involved an inventive step.

- IV. A notice of appeal was filed against this decision by the Opponent on 3 May 1990. The appeal fee was paid on 7 May 1990.

A Statement of Grounds of Appeal and a test report were submitted on 20 June 1990.

- V. In this statement and during oral proceedings held on 16 November 1992, the Appellant argued that, in accordance with decision T 124/87 (OJ EPO 1989, 491), document (4) as a whole destroyed the novelty of the subject-matter of Claims 1, 2 and 4 to 9.

He also argued that the subject-matter of the claims of the disputed patent did not involve an inventive step.

- VI. The Respondent argued in writing and orally that the broad disclosure of document (4) as a whole did not destroy the novelty of the claimed compositions. The generic information in this document comprised a great many possibilities without any disclosure which would lead the skilled person to arrive at the claimed compositions. In this connection he referred to paragraph 3.5 of T 124/87 and to T 7/86 (OJ EPO 1988, 381), both of which found that a substance resulting from the combination of specific

components from several lists should be regarded as a selection and hence as new. However, he admitted that document (4) did not provide any reason which would prevent the skilled reader from combining the different parts of this document, such as the incorporation in the copolymer of functional groups, such as hydroxyl and glycidyl groups, with the teaching of the examples, particularly Example 5.

Moreover, he contested Appellant's view that the claimed subject-matter did not involve an inventive step.

VII. The Appellant requested that the decision under appeal be set aside and that the present patent be revoked.

The Respondent requested that the appeal be dismissed and that the patent be maintained.

VIII. At the conclusion of the oral proceedings, the Board's decision to revoke the patent was announced.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is admissible.

2. Novelty

2.1 According to the established jurisprudence of the Boards of Appeal, when examining novelty, the disclosure of a document has to be considered as a whole and not only on the basis of the examples thereof (cf. for instance

T 12/81, OJ EPO 1982, 296, paragraph 7 of the Reasons; T 332/87 (unpublished), paragraph 2.2 of the Reasons; and T 666/89 (headnote published in OJ EPO 6/1992), paragraphs 5 to 7 of the Reasons.

This means that different passages of one and the same document may be combined, provided that there are no reasons which would prevent a skilled person from making such a combination. Moreover, the technical teaching of examples may be combined with that disclosed elsewhere in the same document, provided that the examples concerned are indeed representative of the general technical teaching disclosed in the document in question.

2.2 Document (4) discloses a process for the preparation of copolymers by polymerisation of (A) 5 to 60 parts by weight of a di(C₁ to C₈)ester of an α,β -ethylenically unsaturated dicarboxylic acid, (B) 10 to 70 parts by weight of a vinyl-aromatic hydrocarbon compound having one vinyl group, (C) 0 to 30 parts by weight of a glycidyl ester of an aliphatic saturated monocarboxylic acid branched in the α -position, (D) 0 to 50 parts by weight of at least one ester, amide and/or anhydride of an α,β -ethylenically unsaturated mono- and/or dicarboxylic acid, and (E) 0 to 40 parts by weight of at least one α,β -ethylenically unsaturated monocarboxylic acid, whereby the total amount of the components (A) to (E) amounts to 100 parts by weight (cf. page 3, line 19 to page 4, line 15).

With respect to component (D), document (4) discloses that suitable esters are those of an appropriate carboxylic acid, preferably acrylic or methacrylic acid, and a monovalent alcohol, such as a borneol, or a polyvalent alcohol (cf. page 5, last paragraph). Moreover, it is set out in this document that, if such an ester of a

monovalent alcohol is used, it is preferred to use it in combination with compounds containing a functional hydroxyl or glycidyl group, for instance a hydroxyalkyl or glycidyl ester of acrylic or methacrylic acid (cf. page 6, lines 9 to 16). Copolymers containing these functional groups can be cured by the use of appropriate curing agents (cf. page 8, line 14 to page 9, line 14 and page 10, lines 8 to 12).

Document (4) also discloses liquid, curable coating compositions based on these polymerisation products and a curing agent, because it reveals that the polymerisation products as such or in the form of solutions are suitable as binder for use in curable coating compositions (cf. page 8, first paragraph, and page 13, lines 20 to 36).

Examples 1, 2, 4 and 5, representing the majority of the examples, are completely in line with this general teaching, because they describe the copolymerisation of, inter alia, a component (D) comprising a mixture of an ester of methacrylic acid with a monovalent alcohol and a hydroxyalkyl (Examples 2 and 4) or glycidyl (Examples 1 and 5) ester of methacrylic acid.

Example 5 discloses the preparation of an addition polymer which results from the copolymerisation of 15.35% by weight of maleic acid dimethyl ester (component A), 45.02% by weight of styrene (component B) and 24.02% by weight of isobornyl methacrylate plus 15.11% by weight of glycidyl methacrylate (component D). This copolymer has a number average molecular weight of 1600 as can be seen from the undisputed experimental report filed by the Appellant on 20 June 1990.

Therefore, the only difference between these prior art copolymers and the copolymers claimed as binder in present

Claims 1 and 9, is that the prior art copolymers contain functional glycidyl groups instead of hydroxyl groups providing a hydroxyl number of 30 to 320.

- 2.3 There is no indication to be found in document (4) - as was admitted by the Respondent - that the general teaching, namely that addition copolymers which are partly built up from an ester of an unsaturated carboxylic acid and a monovalent alcohol, preferably comprising glycidyl groups or, equally, hydroxyl groups, should apply only to a part of the copolymers - or their liquid curable coating compositions - disclosed in this document. Hence, the skilled person would understand this teaching as generally applicable to all copolymers obtainable according to (4) including that of Example 5. Moreover, the skilled person would immediately see from the examples concerning copolymers comprising functional hydroxyl groups, namely Examples 2 and 4 disclosing hydroxyl numbers of 110 and 140 respectively, that the glycidyl methacrylate of the composition of Example 5 may be replaced by hydroxyalkyl methacrylate resulting in an additional polymer falling within the claimed hydroxyl number range of 30 to 320.

Accordingly, the Board finds that combining the relevant general teaching of document (4) when read together with the disclosure of its examples makes available to the public compositions or copolymers falling within the scope of the present Claims 1 and 9. Therefore, in the Board's judgment, the subject-matter of these claims lacks novelty.

- 2.4 The Respondent argued that there is no disclosure in document (4) which would lead the skilled person to combine the polycyclic isobornyl acrylate with monomers which introduce a specific amount of hydroxyl groups as functional groups. Thus, this particular combination

should be considered novel. He further alleged that this view was supported by the decisions T 124/87 and T 7/86.

The Board does not share this opinion. The decision T 124/87 only dealt with the novelty of copolymers of ethylene and at least one α -olefin, wherein the copolymers were defined in terms of their density and melt index. The cited prior art disclosed such copolymers, the above-mentioned parameters of which broadly overlapped with those of the claimed copolymers. In these circumstances, the Board found that the subject-matter lacked novelty. There are certain similarities with the present case insofar as there is an overlap between the known and the claimed subject-matter.

In addition, in the decision T 124/87 a distinction was drawn between that case and the one decided in the decision T 7/86. The latter decision was concerned with the question whether a known class of compounds defined by means of a general formula discloses an individual compound which although falling within the scope of the general formula is not specifically mentioned. The Board answered the question in the negative. However, since in the present case it is a question of a class of compounds and not of an individual compound, the decision is irrelevant. Similarly, the decision T 12/81, which was also concerned with the novelty of an individual chemical entity, is also irrelevant.

- 2.5 According to the established jurisprudence of the Boards of Appeal, for a selection of a group of compounds from a known class to be deemed novel, that selection has to add a new element to what is already known and hence involve a different technical teaching (cf. for instance decision T 12/90 reported in EPOR 5/1991, page 312, section 2.6 of the Reasons).

In the present case, as indicated above, the selection of the hydroxyl group-containing copolymers which are partly built up from isobornyl methacrylate is merely a partial copy of what is already known and, therefore, does not provide any new technical teaching.

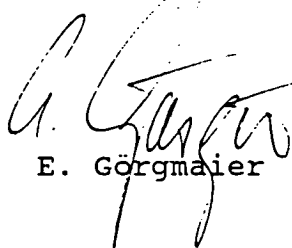
- 2.6 Accordingly, in the Board's judgment, Claims 1 and 9 are not allowable. Moreover, in the absence of any request to consider the subject-matter of dependent Claims 2 to 7 and independent Claim 8, separately, these claims must fall together with Claim 1.
3. Since the present claims are not allowable on the ground of lack of novelty, the Board sees no reasons to consider the issue of inventive step.

Order

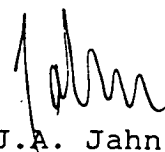
For these reasons, it is decided that:


1. The decision under appeal is set aside.
2. The patent is revoked.

The Registrar:


E. Görgmaier

The Chairman:


K.J.A. Jahn

 22.01.93

00179