

The opinion in support of the decision being entered today was not written for publication and is not precedent of the Board.

Paper No. 27

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KLAUS U. SCHONFELDER, KARL-HEINZ WIEDENMANN
and UWE M. ZAKRZEWSKI

Appeal No. 1997-2070
Application 08/487,921

ON BRIEF

Before CAROFF, JOHN D. SMITH and TIMM, Administrative Patent Judges.

JOHN D. SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal pursuant to 35 U.S.C. § 134 from the final rejection of claims 9 and 13-18. Claims 10-12 stand withdrawn from further consideration as directed to a non-elected invention.

The subject matter on appeal is directed to an tonable¹, radiation sensitive recording material comprising a) a support; b) a tonable, radiation sensitive layer which adheres to the support; and c) a coversheet which adheres to the tonable, radiation sensitive layer wherein the support has greater adhesion to the tonable, radiation sensitive layer than the coversheet. Further, the tonable, radiation sensitive layer comprises at least one compound which after exposure to actinic radiation causes a change in the tackiness of the composition; a photoinitiator; a polymeric binder; and, importantly, a polydiorganosiloxane with polar and/or ethylenically unsaturated groups which is present in the amount of 0.05 to 0.7 % by weight relative to the weight of the tonable, radiation sensitive layer. Significantly, the polydiorganosiloxane component of appellants' tonable radiation sensitive layer influences the adhesion properties

¹ A positive "tonable" material has a tacky photopolymerizable layer, which, upon imagewise exposure, loses its tackiness in the exposed areas while retaining its tackiness in the unexposed areas. Thus, a latent image may be formed by applying suitable toning materials which adhere only to the unexposed, tacky areas. See the specification at page 2.

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of the layer to the support and the coversheet.

As explained in the specification at page 2, such a prior art radiation sensitive recording material with a support; radiation sensitive layer; and coversheet has been utilized in a process which involves removal of the coversheet, lamination of the material to a substrate receptor; followed by imagewise exposure of the material. The support can be removed either before or after exposure takes place. A recurring problem with such prior art systems is the inability to separate the coversheet cleanly from the radiation sensitive layer before lamination to the receptor, because the adhesion between the coversheet and the radiation sensitive layer is too high. As further indicated in the specification, a prior art solution to this problem has involved the utilization of certain aliphatic polyesters which are added to the radiation sensitive layer to modify the adhesion balance. Appellants' invention involves the further improvement to such prior art systems through the use of the claimed polydiorganosiloxane component in the tonable, radiation sensitive layer. Thus the

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presently claimed invention is said to meet the needs of providing the proper "adhesion balance" between the radiation system recording layer and the coversheet.

Appealed claim 9 is representative and is reproduced below:

9. A tonable, radiation sensitive recording material comprising:

- a) a support;
- b) a tonable, radiation sensitive layer which adheres to the support; and
- c) a coversheet which adheres to the tonable, radiation-sensitive layer and wherein the support has greater adhesion to the tonable, radiation-sensitive layer than the cover layer;

wherein said tonable, radiation sensitive layer further comprises i) at least one compound which after exposure to actinic radiation causes a change in the tackiness of the composition; ii) a photoinitiator; iii) a polymeric binder; and iv) a polydiorganosiloxane with polar and/or ethylenic unsaturated groups wherein said polydiorganosiloxane at least partially controls the adhesion balance of the tonable, radiation sensitive layer to the support and the coversheet and is present in 0.05 to 0.7% by weight relative to the weight of the tonable, radiation sensitive layer and excluding polydimethylsiloxane [sic, polydiorganosiloxane].

The references of record relied upon by the examiner are:

Hodakowski

4,116,786

Sept. 26, 1978

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Bauer	4,326,010	Apr. 20, 1982
Bauer et al. (Bauer)	4,892,802	Jan. 9, 1990

Appealed claims 9, 13-16, and 19 stand rejected under 35 U.S.C. § 103 as unpatentable over Hodakowski in view of Bauer '802. Appealed claims 16 and 17 stand rejected under 35 U.S.C.

§ 103 as unpatentable over Hodakowski in view of Bauer '802, further in view of Weitemeyer.²

As evidence of the obviousness of the herein claimed invention (i.e., as defined by claim 9), the examiner relies on the combined disclosures of Hodakowski and Bauer '802. Bauer '802 discloses a representative tonable, radiation sensitive recording material comprising a support; a tonable, radiation sensitive layer which adheres to the support; and a coversheet which adheres to the tonable radiation sensitive layer. Appellants' claimed tonable, radiation sensitive

² The examiner did not restate this rejection in the answer. The examiner considered the rejection of these dependent claims based in part on U.S. Patent 4,963,438 issued to Weitemeyer on October 16, 1990 as moot "because appellants assert that the claims stand or fall together." See the answer at pages 2 and 3. In light of our disposition of the issues raised in this appeal, we will not remand this application to the examiner for a formal restatement of this rejection.

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recording material differs primarily from the prior art tonable, radiation sensitive recording material described and exemplified by Bauer '802 in the requirement of a polydiorganosiloxane component in the radiation sensitive layer, which component functions to control the "adhesion balance" of the tonable, radiation sensitive layer to the support and the coversheet. In this regard, example 7 of Bauer '802 includes a polyester, i.e., polycaprolactone having a molecular weight of 15,000 which functions to provide an adhesion balance between the radiation sensitive layer and support in this prior art material. See Bauer '802 at column 13 and comparative example 1 in appellants' specification at pages 11 and 12.

The crux of the examiner's stated obviousness rejection of the appealed claims is set forth in the examiner's answer at page 6 as follows:

[I]t would have been obvious to one of ordinary skill in this art at the time of the claimed invention to substitute the polydiorganosiloxane of Hodakowski into the radiation-sensitive layer of Bauer et al. [Bauer '802]. One of ordinary skill in this art would have been motivated to make this substitution because of the teaching of Hodakowski that the polydiorganosiloxane adhesion balance controlling compound provide [sic, provides]

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improved inherent surface lubricity to the radiation sensitive layer (column 5, line 36 to column 6, line 51 and column 11, lines 58-68).

We find the examiner's stated obviousness rejection problematical for at least the following reasons. First, Hodakowski does not teach that the polydiorganosiloxane in his composition functions as an "adhesion balance" controlling compound but as a component which imparts "inherent surface lubricity" to a coating. Thus, Hodakowski's radiation curable coating compositions are suited to forming external lubricious coatings for metal sheets which undergo metal forming operations and for forming coatings on a variety of other substrates including panels of thermoplastic or thermoset polymers. See Hodakowski at column 7, line 63 to column 8, line 8. Hodakowski specifically teaches that the radiation curable coating compositions may be applied over conventional dry printing ink designs and cured to perform a protective overprint, or that such coatings can be applied directly over any of the known radiation curable inks. Again, see Hodakowski at column 7, lines 63 to column 8, line 8. Hodakowski, thus, is not directed to or concerned with a tonable-radiation sensitive layer or of a tonable-radiation

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sensitive recording material as described in Bauer '802, much less with providing an "adhesion balance" between a radiation sensitive layer and a support and a coversheet, the particular problem of concern to appellants and Bauer '802. Thus, as persuasively argued by appellants, there is no adequate teaching or suggestion in Hodakowski to add Hodakowski's polydiorganosiloxane to the Bauer '802 tonable radiation sensitive layer. With respect to the examiner's alternative rationale of obviousness based on a proposed modification of Hodakowski's coated articles, we also agree with appellants that the examiner has failed to meet his burden of establishing that such a modification would necessarily result in the claimed tonable, radiation sensitive recording material. Accordingly the examiner's stated obviousness rejection of the appealed claims cannot be sustained.

The decision of the examiner is reversed.

REVERSED

MARC L. CAROFF

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Administrative Patent Judge)	
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JOHN D. SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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CATHERINE TIMM))
Administrative Patent Judge)	

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