

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte HOMAUNE A. RAZAVI

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Appeal No. 1997-1682  
Application No. 08/270,198

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ON BRIEF

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Before KIMLIN, OWENS and KRATZ, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 2, 6, 9 and 11. The appeal of claims 8 and 10, the other claims remaining in the present application, has been withdrawn by appellant. Claims 2 and 9 are illustrative:

Appeal No. 1997-1682  
Application No. 08/270,198

2. A method for substantially eliminating yellowing from exposure to UV light of a laminate of a UV-stabilized vinyl film layer and a UV-cured top coat layer, comprising reducing the presence of UV light in the vinyl film by providing the laminate with a layer that blocks UV light from penetrating the vinyl layer.

9. A yellow-resistant, vinyl film laminate comprising (a) a plasticized polyvinylchloride layer, and (b) a UV-cured top coat containing active UV-activatable, free radical-generating species, wherein said free radical-generating species and said plasticizer are sufficiently immiscible as to avoid reaction in the presence of UV light to an extent sufficient to cause yellowing of the polyvinylchloride layer.

The examiner relies upon the following references as evidence of obviousness:

Olson et al. (Olson)	4,533,595	Aug. 06, 1985
DeBergalis et al. (DeBergalis)	4,585,693	Apr. 29, 1986
Tolliver et al. (Tolliver)	5,069,964	Dec. 03, 1991
Nakajima et al. (Nakajima)	5,254,525	Oct. 19, 1993

(filed Feb. 19, 1992)

Appellant's claimed invention is directed to a method for preventing the migration of unreacted initiator in a UV-cured top coat into a UV-stabilized vinyl film layer. The invention defined by claims 2 and 6 accomplishes this end by placing a UV-absorbing layer between the UV-cured top coat and the UV-stabilized vinyl film. The invention defined by claims 9 and 11 are directed to an embodiment wherein the undesirable migration is prevented by utilizing free radical-generating species and plasticizers that are immiscible with each other.

Appeal No. 1997-1682  
Application No. 08/270,198

Appellant submits at page 3 of the Brief that "[c]laims 2 and 6 do not stand or fall together." Also, appellant stipulates that "[c]laims 9 and 11 do stand or fall together."

Appealed claim 9 stands rejected under 35 U.S.C. § 112, second paragraph. Claims 2 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Nakajima in view of Olson. Also, claims 9 and 11 stand rejected under 35 U.S.C. § 103 as being unpatentable over Tolliver in view of DeBergalis.

We consider first the examiner's rejection of claim 9 under 35 U.S.C. § 112, second paragraph. According to the examiner, "the phrase 'sufficiently immiscible as to . . . to cause yellowing' is vague and indefinite because the clause 'to an extent sufficient to cause yellowing . . .' appears confusing and contradictory with respect to the language to the preamble which recites a 'yellow-resistant' article" (page 3 of Answer). However, the applicable test is not whether claim language could be interpreted in such a way as to render the invention indefinite, but, rather, whether the claim language when read in light of the specification and state of the prior art would be indefinite to one of ordinary skill in

Appeal No. 1997-1682  
Application No. 08/270,198

the art. In the present case, we concur with appellant that when the criticized claim language is read in light of the present specification one of ordinary skill in the art would readily understand that "the components are sufficiently immiscible so that when exposed to light they do not react sufficiently to cause yellowing - i.e. significant reaction together is avoided so as not to cause yellowing" (page 3 of Brief). Accordingly, we will not sustain the examiner's rejection under § 112, second paragraph.

We will sustain the examiner's rejection of claims 2 and 6 under § 103 over Nakajima in view of Olson. As explained by the examiner, Nakajima clearly teaches a vinyl film laminate comprising a plasticized polyvinylchloride layer, a UV-curable top coat and a UV-absorbing layer situated between the polyvinyl-chloride layer and the top coat. In our view, Nakajima clearly describes the features recited in claims 2 and 6 within the meaning of 35 U.S.C. § 102. Since anticipation is the epitome of obviousness, we find no error in the examiner's rejection. Since Nakajima describes the features of claims 2 and 6, it is of no moment that, as argued by appellant, Nakajima does not recognize the problem of

Appeal No. 1997-1682  
Application No. 08/270,198

yellowing occurring when unreacted UV activated free-radical-generating species from one layer are brought together with the plasticizer of the vinyl layer (page 3 of Brief, last paragraph). It would seem that Nakajima would have no opportunity to recognize the stated problem since the UV absorbing layer of Nakajima would prevent the occurrence of such a problem. Furthermore, we totally agree with the examiner that, based on Olson and the state of the prior art, "[i]t would have been obvious to a person of ordinary skill in the art at the time the invention was made to use UV-absorbing layers to block UV radiation from reaching underlying PVC layers" in order "to prevent UV-related discoloration and degradation in PVC-containing laminates" (page 5 of Answer, first paragraph).

We now turn to the examiner's rejection of claims 9 and 11 over Tolliver in view of DeBergalis. We will not sustain this rejection because, as urged by appellant, neither of the "references disclose free radical-plasticizer immiscibility as a means for reducing yellowness caused by interaction of the two" (sentence bridging pages 5 and 6 of Brief). Furthermore, neither of the cited references makes any reference to the

Appeal No. 1997-1682  
Application No. 08/270,198

immiscibility of the free radical-generating species and the plasticizer. Moreover, although the examiner states that Tolliver discloses a means of preventing the migration of plasticizers and other compounds in or out of the PVC substrate, our view of the passages of Tolliver cited by the examiner finds no discussion of migration of plasticizers and other compounds into the PVC substrate. Perhaps the examiner had in mind appellant's discussion of his discovery at page 2 of the present specification, lines 8-12. To quote from Tolliver, "[a]nother risk, however, is that agents within the substrate article such as plasticizers, will tend to migrate from the substrate into the sheeting, commonly also causing pigments or other agents in the substrate to penetrate the sheeting as well" (column 2, lines 40-44, emphasis added). Tolliver further discloses that "[i]n many instances, when the plasticizer migrates into the sheeting it may tend to carry along other agents, e.g., colorants in the substrate such as pigments and dyes, which further impair the performance or appearance of the sheeting" (column 3, lines 2-6, emphasis added).

Appeal No. 1997-1682  
Application No. 08/270,198

One final point remains. Upon return of this application to the examiner, the examiner should consider whether the subject matter defined by claims 9 and 11 finds enabling support in appellant's specification. The present specification gives no examples of the types of free radical-generating species and plasticizers that are sufficiently immiscible to avoid yellowing. Our review of appellant's specification finds only one scant reference to the claimed embodiment of immiscible components, viz., at page 4, at lines 9-11, which read "by employing a UV-initiator species that is substantially immiscible with the plasticizer." The examiner should consider whether one of ordinary skill in the art would have to resort to undue experimentation to determine the particular classes of UV-initiator species and plasticizers that are sufficiently immiscible.

In conclusion, based on the foregoing, the examiner's rejection under 35 U.S.C. § 112, second paragraph, is reversed, as is the examiner's rejection of claims 9 and 11 under 35 U.S.C. § 103. The examiner's rejection of claims 2 and 6 under 35 U.S.C. § 103 is affirmed. Accordingly, the

Appeal No. 1997-1682  
Application No. 08/270,198

examiner's decision rejecting the appealed claims is affirmed-  
in-part.

No time period for taking any subsequent action in  
connection with this appeal may be extended under  
37 CFR § 1.136(a).

AFFIRMED-IN-PART

EDWARD C. KIMLIN	)	
Administrative Patent Judge	)	
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	)	
TERRY J. OWENS	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
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PETER F. KRATZ	)	
Administrative Patent Judge	)	

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