

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ARMAN ASHRAF and
YAN ZHAO

Appeal 2006-2614
Application 10/610,605
Technology Center 1700

Decided: March 12, 2007

Before CHUNG K. PAK, THOMAS A. WALTZ, and PETER F. KRATZ,
Administrative Patent Judges.

KRATZ, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-25. We have jurisdiction pursuant to 35 U.S.C. § 6 (2006).

Appellants' invention is directed to a radiation curable, elastomeric composition, a wearable article including such a material composition, an elastomeric film including a layer made from such a composition, and a process for producing a stretchable laminate including such a layer. The material composition includes: (1) a thermoplastic elastomer (TPE) comprising a block copolymer; (2) a processing oil; and (3) a macro photoinitiator. According to Appellants, the macro photoinitiator component works to enhance the elastic and mechanical properties of the TPE. (Specification 8). Appellants Claim 1 is illustrative and reproduced below:

1. A radiation-curable material comprising:
 - a) from about 20 to about 80 wt% of a thermoplastic elastomer (TPE) which is a block copolymer having at least one hard block comprising vinylarenes and at least one soft block comprising dienes;
 - b) from about 5 to about 60 wt% of a processing oil; and
 - c) from about 1 to about 60 wt% of a macro photoinitiator wherein, after curing, the material has a stress relaxation of less than about 20 percent after 200% elongation at room temperature and a stress relaxation of less than about 45 percent after about 10 hours at 100°F and 50% elongation.

The Examiner relies on the following prior art references as evidence in rejecting the appealed claims:

Everaerts	US 5,407,971	Apr. 18, 1995
Zhao	US 2003/0105232 A1	Jun. 5, 2003 (filed Nov. 13, 2001)
Topolkaraev	US 6,586,354 B1	Jul. 1, 2003 (filed Dec. 28, 1998)

Claims 1-13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Everaerts in view of Zhao. Claims 14-25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Everaerts in view of Zhao and Topolkaraev.

We affirm.

§ 103(a) Rejection over Everaerts and Zhao

At the outset, we note that Appellants argue the claims subject to this rejection as a group. Accordingly, we select claim 1 as the representative claim on which we decide this appeal as to the Examiner's § 103(a) rejection over Everaerts and Zhao.

The Examiner has found that Everaerts discloses TPE elastomers that are formed using styrene-block copolymers and photoinitiated crosslinkers that fall within the scope of the claimed TPE and macro photoinitiator components of the radiation curable material of claim 1 (Answer 4).

Moreover, the Examiner has found that Zhao teaches the use of processing oils in forming cross-linked TPE materials (*Id.*). Based on the combined teachings of Everaerts and Zhao, the Examiner has determined that it would have been obvious to one of ordinary skill in the art at the time of the invention to employ a processing oil in forming the TPE forming composition of Everaerts so as to reduce the modulus and costs of the TPE in light of the disclosure of Zhao (*Id.*).

Appellants do not dispute the Examiner's reliance on Zhao for suggesting the use of a processing oil in forming a radiation cross-linked material as disclosed in Everaerts (Br. 3-5). Nor do Appellants contend that the amount of block copolymer and/or the amount of processing oil required

by representative claim 1 patentably distinguish claim 1 over Everaerts taken with Zhao (*Id.*). Rather, Appellants base their arguments on the claimed macro photoinitiator component (*Id.*). Appellants contend that Everaerts, alone or in combination with Zhao, does not teach the claimed macro photoinitiator; hence, the applied references do not suggest a curable composition capable of forming a product with stress relaxation properties, as claimed (*Id.*). Appellants maintain that the Examiner's reliance on the cross-linking agents of Everaerts is misplaced in that those agents are of a significantly lower molecular weight than the macro photoinitiators required by representative claim 1 (*Id.*). More particularly, Appellants assert that Everaerts exemplifies cross-linking agents of a molecular weight of about 300 grams per mole whereas Appellants' claimed macro photoinitiator is of a number average molecular weight of between about 5,000 to about 300,000 (Br. 3-4).

Dispositive Issue Raised

Have Appellants identified reversible error in the Examiner's § 103(a) rejection over Everaerts and Zhao in their Brief? More particularly, does Everaerts fail to teach or suggest using a macro photoinitiator of a size falling within the size required by representative claim 1?

We answer those questions in the negative and affirm the Examiner's rejection, on this record.

Additional Facts/Analysis and Conclusions

The Examiner has found that Everaerts discloses employing a polymeric benzophenone (PDMS benzophenone) with a molecular weight of 8,000 or a polyester bisbenzophenone with a molecular weight of 5,000 as a photoinitiator (Final Rejection 4; Everaerts, col. 8, ll. 40-69). Appellants do

not dispute this particular finding in the Brief. Thus, accepting *arguendo*, Appellants' contention that the claim 1 macro photoinitiator is limited to a photoinitiator which has a molecular weight between 5,000 and 130,000, such argument is not persuasive. This is because the Examiner has found that Everaerts discloses a photoinitiator (cross-linker), such as PDMS benzophenone with a molecular weight of 8,000 or polyester bisbenzophenone with a molecular weight of 5,000, either of which suggests a photoinitiator within Appellants' argued claim scope.¹

On this record, we conclude that the Examiner has presented a prima facie case of obviousness which has not been successfully rebutted by Appellants.

In other words, Appellants have not identified any reversible error underlying the Examiner's rejection in the Brief. In particular, Appellants have not established that representative claim 1 requires a macro photoinitiator with a molecular weight higher than the photoinitiators (cross-linking agents) taught or suggested by Everaerts taken with Zhao.

Consequently, we affirm the Examiner's obviousness rejection of claims 1-13 over Everaerts in view of Zhao.

¹ The Examiner has correctly determined that Appellants do not define the claim term "macro photoinitiator" in their Specification. Hence, like the Examiner, we determine that representative claim 1 is not limited to the argued molecular weight range for the macro photoinitiator. However, in as much as Appellants' argued narrow scope is unavailing to Appellants' position, we need not further address a claim interpretation issue in deciding this appeal.

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§ 103(a) Rejection over Everaerts, Zhao and Topolkaraev

Appellants contest this rejection primarily on the basis of the claimed macrophotoinitiator not being taught or suggested by the applied references for substantially the reasons advanced against the Examiner's rejection of claims 1-13 (Br. 5-6). In this regard, Appellants' generalized assertion of picking and choosing does not address, with any particularity, the Examiner's finding of motivation based on an asserted increased melt strength (Br. 6; Answer 5). For the reasons advanced above, it follows that we shall also affirm the Examiner's obviousness rejection of claims 14-25 over Everaerts, Zhao and Topolkaraev.

ORDER

The Examiner's decision to reject claims 1-13 under 35 U.S.C. § 103(a) as being unpatentable over Everaerts in view of Zhao and to reject claims 14-25 under 35 U.S.C. § 103(a) as being unpatentable over Everaerts in view of Zhao and Topolkaraev is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2006).

AFFIRMED

tf/ls

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