environments and in various regions of the world. It is also desirable to produce a low cost water detecting label.

Summary of the Invention

[0004] The present invention is directed to a fluid detecting adhesive article that indicates when a substrate to which the adhesive article is applied has been submerged in a fluid, such as water. The adhesive article may be an adhesive tape, label or sheet.

[0004a] In a first aspect of the present invention, a water detecting adhesive article is disclosed, the water detecting adhesive article comprising: a fluid absorbent layer having a first major surface and a second major surface; a pressure sensitive adhesive layer underlying the second major surface of the absorbent layer; a dried transparent topcoat applied to the first major surface of the fluid absorbent layer in the form of an aqueous acrylic dispersion, the transparent topcoat having a first major surface and a second major surface; and a color migrating layer adjacent to the second major surface of the absorbent layer and overlying the adhesive layer.

[0005] The adhesive article, in one embodiment, comprises a fluid absorbent layer having a first major surface and a second major surface and a pressure sensitive adhesive layer underlying the second major surface of the absorbent layer. The absorbent layer, in one embodiment, is water absorbent. A transparent topcoat having a first major surface and a second major surface overlies the first major surface of the absorbent layer. The transparent topcoat provides humidity resistance to the absorbent layer. A color migrating layer is provided adjacent to the second major surface of the absorbent layer and overlying the adhesive layer. A release liner may be adhered to the adhesive layer.

Brief Description of the Drawings

[0006] FIG. 1 is a cross-sectional view of an embodiment of a label of the present invention having a continuous color migrating layer.

[0007] FIG. 2 is a cross-sectional view of an embodiment of a label of the present invention having a discontinuous color migrating layer.

[0008] FIG. 3 is a perspective view of the label of FIG. 2 after exposure to fluid.

Detailed Description of the Invention

[0009] The term "overlies" and cognate terms such as overlying and the like, when referring to the relationship of one or a first layer relative to another or a second layer, refers to

1. A water detecting adhesive article comprising:

a fluid absorbent layer having a first major surface and a second major surface;

a pressure sensitive adhesive layer underlying the second major surface of the absorbent layer;

a dried transparent topcoat applied to the first major surface of the fluid absorbent layer in the form of an aqueous acrylic dispersion, the transparent topcoat having a first major surface and a second major surface; and

a color migrating layer adjacent to the second major surface of the absorbent layer and overlying the adhesive layer.

2. The adhesive article of claim 1 wherein the fluid absorbent layer has a porosity of at least about 800 ml/min.

3. The adhesive article of claim 1 or 2 wherein the absorbent layer is water absorbent.

4. The adhesive article of any one of claims 1 to 3 wherein the fluid absorbent layer comprises wood-free paper.

5. The adhesive article of any one of the preceding claims wherein the adhesive layer comprises an emulsion acrylic adhesive.

~~7~~6. The adhesive article of claim ~~6~~ 1 wherein the coat weight of the topcoat is about 1 gsm to about 20 gsm.

~~8~~7. The adhesive article of claim ~~6~~ 1 wherein the coat weight of the topcoat is about 1 gsm to about 10 gsm.

~~9~~8. The adhesive article of any one of the preceding claims wherein the color migrating layer is a continuous layer.

~~10~~9. The adhesive article of any one of claims 1 to ~~8~~ 7 wherein the color migrating layer is a discontinuous layer.

~~11~~10. The adhesive article of claim ~~10~~ 9 wherein the color migrating layer comprises a pattern.

~~12~~11. The adhesive article of claim ~~10~~ 9 wherein the color migrating layer comprises at least one alpha numeric character.

~~13~~12. The adhesive article of any one of the preceding claims wherein the color migrating layer comprises a water soluble ink.

~~14~~13. The adhesive article of any one of the preceding claims further comprising a release liner adhered to the adhesive layer.

~~15~~14. The adhesive article of any one of the preceding claims wherein the first major surface of the transparent topcoat is printable.