Citation List

Patent Literature

[0012] PTL 1: Japanese Patent Publication No. 2010-185029

PTL 2: Japanese Patent Publication No. 2010-59254

PTL 3: Japanese Patent Publication No. 2003-235889

PTL 4: Japanese Patent Publication No. 2003-82250

PTL 5: Japanese Patent No. 3722550

PTL 6: Japanese Patent Publication No. 2011-19896

PTL 7: Japanese Patent No. 3783914

PTL 8: Japanese Patent Publication No. 2004-275225

Summary of Invention

Technical Problem

[0013] The present invention has been made in view of the problem arising when making a thin absorbent article. In other words, an object of the present invention is to provide an absorbent article that has a high absorption speed, is unlikely to cause a liquid to remain on a skin-contacting surface, has excellent dry feeling, and is unlikely to cause excreted body fluid to return.

Solution to Problem

[0014] The present invention, which can solve the above problem, provides an absorbent article comprising an absorber composed of at least one absorbent layer, wherein a water-absorbent resin powder meeting the following requirements (a) to (d) is disposed in an uppermost layer of the absorber;

(a) a bulk density: 0.45 g/ml to 0.62 g/ml;

(b) an absorption speed by a vortex method: 20 seconds to 50 seconds;

(c) a liquid-passing speed under load: 10 seconds or less; and

(d) a moisture absorption blocking ratio: *5%* or less,

wherein the water-absorbent resin powder is obtained by treating, with a surface modifier (B), a dried product of a crosslinked polymer (A) obtained by polymerizing a monomer composition containing: a water-soluble ethylenically unsaturated monomer (a1) and/or a hydrolyzable monomer (a2) producing the water-soluble ethylenically unsaturated monomer (a1) by hydrolysis; and an internal crosslinking agent (b), and

wherein the surface modifier (B) is at least one member selected from the group consisting of carboxy-modified polysiloxanes, and amino-modified. The water-soluble ethylenically unsaturated monomer (a1) is at least one member selected from the group consisting of (meth)acrylic acid and (meth)acrylic acid salt. The internal crosslinking agent (b) is at least one member selected from the group consisting of bis(meth)acrylamides having 8 to 12 carbon atoms, poly(meth)acrylates of polyols having 2 to 10 carbon atoms, and poly(meth)allyl ethers of polyols having 2 to 10 carbon atoms.

Since the water-absorbent resin powder used in the present invention can readily pass body fluid to a lower portion of the absorber. As a result, the absorbent article of the present invention has a high absorption speed, excellent dry feeling of the absorber surface, and is unlikely to cause excreted body fluid to return. In addition, even when body fluid is repeatedly absorbed, the absorption speed is unlikely to decrease.

[0015] In light of exhibiting high water absorbability, an absorption ratio of the water-absorbent resin powder is preferably from 40 g/g to 55 g/g and a water-retaining capacity of the water-absorbent resin powder is preferably from 20 g/g to 45 g/g.

[0016] The water-absorbent resin powder is preferably, for example, a water-absorbent resin powder obtained by treating, with a surface modifier (B), a crosslinked polymer (A) obtained by polymerizing a monomer composition containing: a water-soluble

Claims

[Claim 1] An absorbent article comprising an absorber composed of at least one absorbent layer, wherein
a water-absorbent resin powder meeting the following requirements (a) to (d) is disposed in an uppermost layer of the absorber:
(a) a bulk density: 0.45 g/ml to 0.62 g/ml;
(b) an absorption speed by a vortex method: 20 seconds to 50 seconds;
(c) a liquid-passing speed under load: 10 seconds or less; and
(d) a moisture absorption blocking ratio: 5% or less**,**
wherein the water-absorbent resin powder is obtained by treating, with a surface modifier (B), a dried product of a crosslinked polymer (A) obtained by polymerizing a monomer composition containing: a water-soluble ethylenically unsaturated monomer (a1) and/or a hydrolyzable monomer (a2) producing the water-soluble ethylenically unsaturated monomer (a1) by hydrolysis; and an internal crosslinking agent (b), and
wherein the surface modifier (B) is at least one member selected from the group consisting of carboxy-modified polysiloxanes, and amino-modified polysiloxanes,
wherein the water-soluble ethylenically unsaturated monomer (a1) is at least one member selected from the group consisting of (meth)acrylic acid and (meth)acrylic acid salt and
wherein the internal crosslinking agent (b) is at least one member selected from the group consisting of bis(meth)acrylamides having 8 to 12 carbon atoms, poly(meth)acrylates of polyols having 2 to 10 carbon atoms, and poly(meth)allyl ethers of polyols having 2 to 10 carbon atoms.

[Claim 2] The absorbent article according to claim 1, wherein an absorption ratio of the water-absorbent resin powder is from 40 g/g to 55 g/g.

[Claim 3] The absorbent article according to claim 1, wherein a water-retaining capacity of the water-absorbent resin powder is from 20 g/g to 45 g/g.

[Claim 4] The absorbent article according to claim 1, wherein an amount of the surface modifier (B) for the treatment is from 0.001 part by mass to 1 part by mass with respect to 100 parts by mass of the crosslinked polymer (A).

[Claim 5] The absorbent article according to claim 1, wherein the uppermost absorbent layer has a plurality of water-absorbent resin powder present regions in which the water-absorbent resin powder is enveloped and a water-absorbent resin powder absent region adjacent to the water-absorbent resin powder present regions.

[Claim 6] The absorbent article according to claim 1, further comprising an absorbent layer including a water-absorbent resin powder and a fibrous base material as a lower layer adjacent to the uppermost layer.