the water-absorbent resin.

Means for Solving the Problems

The present inventors have performed thorough studies to solve the problems described above. Consequently, they have found that a water-absorbent resin whose absorption capacity elasticity index indicated by the product of the storage elastic modulus and the centrifuge retention rate of the water-absorbent resin is equal to or more than a predetermined value is used as an absorbent article, and thus better absorption performance under a load is achieved. Specifically, the present disclosure provides the followings.

(1) In one aspect, the present disclosure provides a water-absorbent resin which is obtained by polymerizing a water-soluble ethylenically unsaturated monomer in the presence of an azo based compound and a peroxide and in the presence of an internal-crosslinking agent and performing post-crosslinking with a post-crosslinking agent, wherein the azo based compound is present in a proportion of 40 mass% or more and 80 mass% or less in the total used amount of the azo based compound and the peroxide, where a water-absorption capacity of physiological saline under a load of 4.14 kPa is 16 mL/g or more, a mass proportion of particles from 150 to 850 μm relative to the whole proportion is 85 mass% or more, moreover a mass proportion of particles from 300 to 400 μm relative to the whole proportion is 20 mass% or more, an absorption capacity elasticity index represented by formula (I) is 68000 or more=, and

absorption capacity elasticity index = storage elastic modulus [Pa] × centrifugal retention rate [g/g] ...(I)

(2) The present disclosure provides, in the disclosure according to above (1), the water- absorbent resin, where tanδ

CLAIMS

1. A water-absorbent resin which is obtained by polymerizing a water-soluble ethylenically unsaturated monomer in the presence of an azo based compound and a peroxide and in the presence of an internal-crosslinking agent and performing post-crosslinking with a post-crosslinking agent,

wherein the azo based compound is present in a proportion of 40 mass% or more and 80 mass% or less in the total used amount of the azo based compound and the peroxide,

wherein a water-absorption capacity of physiological saline under a load of 4.14 kPa is 16 mL/g or more,

a mass proportion of particles from 150 to 850 μm relative to the whole proportion is 85 mass% or more, moreover a mass proportion of particles from 300 to 400 μm relative to the whole proportion is 20 mass% or more,

an absorption capacity elasticity index represented by formula (I) is 68000 or more, and

absorption capacity elasticity index = storage elastic modulus [Pa] × centrifugal retention rate [g/g] ...(I)

2. The water-absorbent resin according to claim 1, wherein tanδ measured by sizing the 300 to 400 μm particles of the water-absorbent resin is 2.00×10^{-2} or less.

3. An absorbent article which is formed with an absorbent material containing the water-absorbent resin according to claim 1 or 2.