CLAIMS

1. A method for producing a water-absorbent resin comprising subjecting primary articles obtained by a first-step reversed phase suspension polymerization to agglomeration according to a second-step reversed phase suspension polymerization, each step using an internal-crosslinking agent-added water-soluble ethylenically unsaturated monomer, characterized in that A and B satisfy the relationships of:

$$A \leq 0.5 \times 10^{-3}, \text{ and } 2 \leq B/A \leq 10,$$

wherein an amount of the internal-crosslinking agent added in the first-step monomers, based on 100 mol of the water-soluble ethylenically unsaturated monomer used in the first step, is defined as A mol, and an amount of the internal-crosslinking agent added in the second-step monomers, based on 100 mol of the water-soluble ethylenically unsaturated monomer used in the second step, is defined as B mol wherein the internal-crosslinking agent is at least one member selected from the group consisting of (poly)ethylene glycol diglycidyl ether, (poly)propylene glycol diglycidyl ether, (poly)glycerol diglycidyl ether, and N,N'-methylenebis(meth)acrylamide.

2. The method for producing a water-absorbent resin according to claim 1, wherein after the termination of the second-step reversed phase suspension polymerization of the water-soluble ethylenically unsaturated monomer, a post-cross-linking agent is added to carry out post-crosslinking.

3. The method for producing a water-absorbent resin according to claim 1 or claim 2, wherein water-soluble ethylenically unsaturated monomer is at least one member selected from the group consisting of (meth)acrylic acid or salts thereof, (meth)acryl-amide, and N,N-dimethylacrylamide.

4. A water-absorbent resin obtained by the method defined in any one of claims 1 to 3.

5. An absorbent material comprising the water-absorbent resin as defined in claim 4 and a hydrophilic fiber.

6. An absorbent article comprising the absorbent article as defined in claim 5, held between a liquid-permeable sheet and a liquid-impermeable sheet.

CLAIMS

1. A method for producing a water-absorbent resin comprising subjecting primary particles obtained by a first-step reversed phase suspension polymerization to agglomeration according to a second-step reversed phase suspension polymerization, each step using an internal-crosslinking agent-added water-soluble ethylenically unsaturated monomer, characterized in that A and B satisfy the relationships of:

$$A \leq 5.0 \times 10^{-3}, \text{ and } 2 \leq B/A \leq 10,$$

wherein an amount of the internal-crosslinking agent added in the first-step monomers, based on 100 mol of the water-soluble ethylenically unsaturated monomer used in the first step, is defined as A mol, and an amount of the internal-crosslinking agent added in the second-step monomers, based on 100 mol of the water-soluble ethylenically unsaturated monomer used in the second step, is defined as B mol

wherein the internal-crosslinking agent is at least one member selected from the group consisting of (poly)ethylene glycol diglycidyl ether, (poly)propylene glycol diglycidyl ether, (poly)glycerol diglycidyl ether, and N,N'-methylenebis(meth)acrylamide.

2. The method for producing a water-absorbent resin according to claim 1, wherein after the termination of the second-step reversed phase suspension polymerization of the water-soluble ethylenically unsaturated monomer, a post-crosslinking agent is added to carry out post-crosslinking.

3. The method for producing a water-absorbent resin according to claim 1 or claim 2, wherein water-soluble ethylenically unsaturated monomer is at least one member selected from the group consisting of (meth)acrylic acid or salts thereof, (meth)acrylamide, and N,N-dimethylacrylamide.

4. A water-absorbent resin obtained by the method defined in any one of claims 1 to 3.

5. An absorbent material comprising the water-absorbent resin as defined in claim 4 and a hydrophilic fiber.

6. An absorbent article comprising the absorbent material as defined in claim 5, held between a liquid-permeable sheet and a liquid-impermeable sheet.