CLAIMS

1. A process for increasing the hydrophobicity of a porous product by treating the product or a composition providing the product, with a water repellent material, characterised in that the porous product or a composition providing the product is treated with an aqueous suspension of microcapsules , where the microcapsules comprise a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units.
2. A process according to Claim 2, wherein the water repellent organopolysiloxane core material comprises polydimethylsiloxane.
3. A process according to any preceding Claim, wherein the microcapsules are obtainable by the addition of a water-reactive silicon compound comprising a tetraalkoxysilane to an aqueous emulsion of a water repellent organopolysiloxane, whereby the water-reactive silicon compound condenses and polymerises at the interface of the droplets in the emulsion to form said microcapsules.
4. A process according to Claim 3, wherein the water-reactive silicon compound is tetraethoxysilane.
5. A process according to any of Claim 3 or 4, wherein a quaternised aminoalkylalkoxysilane is added to the aqueous emulsion before or simultaneously with the water reactive silicon compound.
6. A process according to claim 1 wherein microcapsules comprising a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units are added to a cementitious composition and the composition is shaped and hardened to form a cementitious product.
7. A process according to Claim 6 for making a water repellent aerated cement product, wherein the microcapsules are added to a foamable cementitious composition.
8. A process according to claim 1 wherein microcapsules comprising a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units are added to a clay based composition and the composition is shaped and hardened to form a brick or tile product.
9. Use of microcapsules comprising a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units as a water repellent for a porous product.
10. Use of microcapsules according to claim 9 where the porous product is selected from the group consisting of cementitious substrates, clay-based bricks, gypsum-based substrates, lime-based substrates or wood-based substrates.

CLAIMS

1. A process for increasing the hydrophobicity of a porous product by treating the product or a composition providing the product, with a water repellent material, characterised in that the porous product or a composition providing the product is treated with an aqueous suspension of microcapsules, where the microcapsules comprise a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units.

2. A process according to Claim 1, wherein the water repellent organopolysiloxane core material comprises polydimethylsiloxane.

3. A process according to any preceding Claim, wherein the microcapsules are obtainable by the addition of a water-reactive silicon compound comprising a tetraalkoxysilane to an aqueous emulsion of a water repellent organopolysiloxane, whereby the water-reactive silicon compound condenses and polymerises at the interface of the droplets in the emulsion to form said microcapsules.

4. A process according to Claim 3, wherein the water-reactive silicon compound is tetraethoxysilane.

5. A process according to any of Claim 3 or 4 wherein a quaternised aminoalkylalkoxysilane is added to the aqueous emulsion before or simultaneously with the water reactive silicon compound.

6. A process according to claim 1 wherein microcapsules comprising a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units are added to a cementitious composition and the composition is shaped and hardened to form a cementitious product.

7. A process according to Claim 6 for making a water repellent aerated cement product, wherein the microcapsules are added to a foamable cementitious composition.

8. A process according to claim 1 wherein microcapsules comprising a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units are added to a clay based composition and the composition is shaped and hardened to form a brick or tile product.

9. Use of microcapsules comprising a water repellent organopolysiloxane core material and a shell of a silicon-based network polymer comprising silica units as a water repellent for a porous product.

10. Use of microcapsules according to claim 9 where the porous product is selected from the group consisting of cementitious substrates, clay-based bricks, gypsum-based substrates, lime-based substrates or wood-based substrates.