CLAIMS

1. A tactile indicator made from a strain hardening cementitious composite comprising a binder, a fine aggregate, a polymer fiber and water, the tactile indicator having a density in the range of 1500 kg/m^3 to 2300 kg/m^3, a compressive strength in the range of 20 MPa to 150 MPa, and a ductility in the range of 1 % to 5 %.

2. The tactile indicator according to claim 1, wherein the binder is selected from the group consisting of ordinary Portland cement, coal fly ash, a pozzolanic admixture, and a combination thereof.

3. The tactile indicator according to claim 2, wherein the ordinary Portland cement comprises or consists of a Type I Portland cement of grade 42.5 or 52.5.

4. The tactile indicator according to claim 2 or 3, wherein the coal fly ash comprises or consists of a Class F fly ash.

5. The tactile indicator according to any one of claims 2 to 4, wherein the pozzolanic admixture is selected from the group consisting of silica fume, ground granulated blast-furnace slag, and a combination thereof.

6. The tactile indicator according to any one of claims 1 to 5, wherein the fine aggregate comprises or consists of micro silica sand.

7. The tactile indicator according to claim 6, wherein the micro silica sand has a size in the range of 100 µm to 180 µm.

8. The tactile indicator according to any one of claims 1 to 7, wherein weight ratio of water to the binder is in the range of 0.15 to 0.5.

9. The tactile indicator according to any one of claims 1 to 8, wherein the strain hardening cementitious composite further comprises a water reducing agent.

10. The tactile indicator according to claim 9, wherein the water reducing agent is selected from the group consisting of carboxylated polymer, gypsum, anhydrite, and a combination thereof.

11. The tactile indicator according to claim 9 or 10, wherein weight ratio of the water reducing agent to the binder is in the range of 0.004 to 0.02.

12. The tactile indicator according to any one of claims 1 to 11, wherein the polymer fiber is selected from the group consisting of a polyvinyl alcohol fiber, a polyethylene fiber, a polypropylene fiber, and a combination thereof.

13. The tactile indicator according to claim 12, wherein the polymer fiber is a polyvinyl alcohol fiber.

14. The tactile indicator according to claim 13, wherein the polyvinyl alcohol fiber has a length of 6 mm to 18 mm, diameter of 10 μm to 100 μm and density of 1200 kg/m^3 to 1500 kg/m^3.

15. The tactile indicator according to claim 13 or 14, wherein the polyvinyl alcohol fiber has a length of 12 mm, diameter of 39 µm and density of 1300 kg/m^3.

16. The tactile indicator according to claim 12, wherein the polymer fiber is a polyethylene fiber.

17. The tactile indicator according to claim 16, wherein the polyethylene fiber has a length of 6 mm to 18 mm, diameter of 10 µm to 80 µm and density of 800 kg/m^3 to 1000 kg/m^3.

18. The tactile indicator according to claim 16 or 17, wherein the polyethylene fiber has a length of 18 mm, diameter of 19 µm and density of 950 kg/m^3.

19. The tactile indicator according to any one of claims 1 to 18, wherein volume ratio of the polymer fiber to the strain hardening cementitious composite is in the range of 0.01 to 0.02.

20. The tactile indicator according to any one of claims 1 to 19, wherein the tactile indicator has a thickness in the range of 8 mm to 15 mm.

21. A method of preparing a strain cementitious composite according to any one of claims 1 to 20, the method comprising:

mixing a binder and a fine aggregate to form a dry mixture,

adding water to the dry mixture under agitation to form a wet mixture,

adding a polymer fiber to the wet mixture under agitation to form a fiber-dispersed mixture, and

curing the fiber-dispersed mixture.

22. The method according to claim 21, wherein adding water to the dry mixture comprises adding a water reducing agent along with the water to the dry mixture.

23. The method according to claim 22, wherein curing the fiber-dispersed mixture comprises disposing the fiber-dispersed mixture in a mould, and curing the fiber-dispersed mixture under ambient conditions.

24. A tactile indicator prepared by a method according to any one of claims 21 to 23.