WHAT IS CLAIMED IS:

1. A composition, comprising:

one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition; and

at least one member chosen from

attapulgite present in an amount ranging from 0.01% to 4.00% by dry weight of the composition;

sepiolite present in an amount ranging from 0.1% to 6% by weight of the composition; and

palygorskite present in an amount ranging from 0.05% to 5% by weight of the composition.

2. The composition of claim 1, wherein the composition further comprises water in an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials.

3. The composition of claim 2, wherein the amount W/C ranges from 0.35 to 0.60.

4. The composition of claim 1, wherein the composition is in the form chosen from concrete, cement paste, and mortar.

5. The composition of claim 1, wherein the attapulgite is present in an amount ranging from 0.02% to 0.7% by weight of the composition.

6. The composition of claim 1, wherein the attapulgite is present in an amount ranging from 0.03% to 0.15% by weight of the composition.

7. The composition of claim 1, wherein the attapulgite is a purified attapulgite.

8. The composition of claim 1, wherein the at least one member is purified attapulgite and is present in an amount ranging from 0.01% to 4.00% by dry weight of the composition.

9. The composition of claim 5, wherein the one or more cementitious binder materials are present in an amount ranging from 0.5% to 75% by weight of the composition.

10. The composition of claim 1, wherein the one or more cementitious binder materials are chosen from Portland cements and lime.

11. The composition of claim 1, further comprising one or more aggregates present in an amount ranging from 10% to 80% by weight of the dry components.

12. The composition of claim 1, further comprising one or more admixtures present in an amount ranging from 0.02% to 4% by weight of cementitious material.

13. The composition of claim 1, wherein the one or more cementitious binder materials further comprise one or more supplementary cementitious materials.

14. A method of making a composition, comprising

mixing (a) one or more cementitious materials; and

(b) at least one member chosen from attapulgite, sepiolite, and palygorskite;

to form a resultant composition;

wherein the (a) one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition;

wherein the (b) the attapulgite, when chosen, is present in an amount ranging from 0.01% to 4.00% by dry weight of the composition; the sepiolite, when chosen, is present in an amount ranging from 0.1% to 6% by weight of the composition; and the palygorskite, when chosen, is present in an amount ranging from 0.05% to 5% by weight of the composition.

15. The method of claim 14, further comprising mixing water in an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials.

16. The method of claim 14, wherein the composition is free from a setting agent.

17. A method of making a composition, comprising

(1) mixing (a) one or more cementitious materials; and

(b) attapulgite; and

(c) water an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials

to form a resultant composition; and

(2) spraying the resultant composition in a shotcrete process to make a structure;

wherein the (a) one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition;

wherein the (b) attapulgite present in an amount ranging from 0.01% to 1.00% by dry weight of the composition.

18. The method of claim 17, wherein the shotcrete process is a wet-mix shotcrete process.

19. The method of claim 17, wherein the shotcrete process is a dry-mix shotcrete process.

20. The method of claim 17, further comprising building up 10 inches or more of shotcrete on a vertical surface.

AMENDED CLAIMS
received by the International Bureau on 31 August 2015 (31.08.2015)

WHAT IS CLAIMED IS:

1. A composition, comprising:

one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition; and

purified attapulgite substantially free of non-attapulgite minerals present in an amount ranging from 0.01% to 4.00% by dry weight of the composition.

2. The composition of claim 1, wherein the composition further comprises water in an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials.

3. The composition of claim 2, wherein the amount W/C ranges from 0.35 to 0.60.

4. The composition of claim 1, wherein the composition is in the form chosen from concrete, cement paste, and mortar.

5. The composition of claim 1, wherein the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.02% to 0.7% by weight of the composition.

6. The composition of claim 1, wherein the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.03% to 0.15% by weight of the composition.

7. (Canceled)

8. The composition of claim 1, wherein the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.01% to 4.00% by dry weight of the composition.

9. The composition of claim 5, wherein the one or more cementitious binder materials are present in an amount ranging from 0.5% to 75% by weight of the composition.

10. The composition of claim 1, wherein the one or more cementitious binder materials are chosen from Portland cements and lime.

11. The composition of claim 1, further comprising one or more aggregates present in an amount ranging from 10% to 80% by weight of the dry components.

12. The composition of claim 1, further comprising one or more admixtures present in an amount ranging from 0.02% to 4% by weight of cementitious material.

13. The composition of claim 1, wherein the one or more cementitious binder materials further comprise one or more supplementary cementitious materials.

14. A method of making a composition, comprising

mixing (a) one or more cementitious materials; and

(b) purified attapulgite substantially free of non-attapulgite minerals;

to form a resultant composition;

wherein the (a) one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition;

wherein the (b) the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.01% to 4.00% by dry weight of the composition.

15. The method of claim 14, further comprising mixing water in an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials.

16. The method of claim 14, wherein the composition is free from a setting agent.

17. A method of making a composition, comprising

(1) mixing (a) one or more cementitious materials; and

(b) purified attapulgite substantially free of non-attapulgite minerals; and

(c) water an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials

to form a resultant composition; and

(2) spraying the resultant composition in a shotcrete process to make a structure;

wherein the (a) one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition;

wherein the (b) purified attapulgite substantially free of non-attapulgite minerals present in an amount ranging from 0.01% to 1.00% by dry weight of the composition.

18. The method of claim 17, wherein the shotcrete process is a wet-mix shotcrete process.

19. The method of claim 17, wherein the shotcrete process is a dry-mix shotcrete process.

20. The method of claim 17, further comprising building up 10 inches or more of shotcrete on a vertical surface.

What is claimed is:

1. A composition, comprising:

one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition; and

purified attapulgite substantially free of non-attapulgite minerals present in an amount ranging from 0.01% to 1.00% by dry weight of the composition.

2. The composition of claim **1**, wherein the composition further comprises water in an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials.

3. The composition of claim **2**, wherein the amount W/C ranges from 0.35 to 0.60.

4. The composition of claim **1**, wherein the composition is in the form selected from the group consisting of concrete, cement paste, and mortar.

5. The composition of claim **1**, wherein the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.02% to 0.7% by weight of the composition.

6. The composition of claim **1**, wherein the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.03% to 0.15% by weight of the composition.

7. The composition of claim **1**, wherein the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.075% to 0.20% by dry weight of the composition.

8. The composition of claim **5**, wherein the one or more cementitious binder materials are present in an amount ranging from 0.5% to 75% by weight of the composition.

9. The composition of claim **1**, wherein the one or more cementitious binder materials are selected from the group consisting of from Portland cements and lime.

10. The composition of claim **1**, further comprising one or more aggregates present in an amount ranging from 10% to 80% by weight of the dry components.

11. The composition of claim **1**, further comprising one or more admixtures present in an amount ranging from 0.02% to 4% by weight of cementitious material.

12. The composition of claim **1**, wherein the one or more cementitious binder materials further comprise one or more supplementary cementitious materials.

13. A method of making a composition, comprising

mixing (a) one or more cementitious materials; and

(b) purified attapulgite substantially free of non-attapulgite minerals;

to form a resultant composition;

wherein the (a) one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition;

wherein the (b) the purified attapulgite substantially free of non-attapulgite minerals is present in an amount ranging from 0.01% to 1.00% by dry weight of the composition.

14. The method of claim **13**, further comprising mixing water in an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials.

15. The method of claim **13**, wherein the composition is free from a setting agent.

16. A method of making a composition, comprising

(1) mixing (a) one or more cementitious materials; and

(b) purified attapulgite substantially free of non-attapulgite minerals; and

(c) water an amount ranging from 0.2 to 0.7 W/C, wherein W is the mass of the water, and wherein C is the dry mass of the one or more cementitious binder materials

to form a resultant composition; and

(2) spraying the resultant composition in a shotcrete process to make a structure;

wherein the (a) one or more cementitious binder materials present in an amount ranging from 0.5% to 75% by dry weight of the composition;

wherein the (b) purified attapulgite substantially free of non-attapulgite minerals present in an amount ranging from 0.01% to 1.00% by dry weight of the composition.

17. The method of claim **16**, wherein the shotcrete process is a wet-mix shotcrete process.

18. The method of claim **16**, wherein the shotcrete process is a dry-mix shotcrete process.

19. The method of claim **16**, further comprising building up 10 inches or more of shotcrete on a vertical surface.

20. The composition of claim **1**, further comprising silica fume in an amount less than 10% by weight of the cementitious binder materials.