

What is claimed is:

1. An additive formulation comprising:
a Quat Silane, and
a fungicide,
wherein the ratio of the Quat Silane to the fungicide in the formulation is in a range of about 10:1 to about 1:10.
2. The additive formulation according to claim 1, wherein the Quat Silane is non-aqueous.
3. The additive formulation according to claim 1, wherein the ratio of the Quat Silane to the fungicide in the formulation is in a range of about 5:1 to about 1:5.
4. The additive formulation according to claim 1, further comprising a defoamer.
5. The additive formulation according to claim 4, wherein the defoamer is selected from the group consisting of polyether amine, ethoxylated alcohol, silicone-based defoamer, tributyl phosphate, and a combination thereof.
6. The additive formulation according to claim 1, wherein the defoamer is from about 2 weight % to about 25 weight % of the amount of the Quat Silane in the formulation.
7. The additive formulation according to claim 1, wherein the fungicide is selected from the group consisting of Sodium OrthophenylPhenol, Imazalil Sulphate,

diiodomethyl-p-tolylsulfone, carbamate, isothiazolinone, azole, chlorothalonil, zinc pyrrhione, copper pyrrhione, sodium pyrrhione, and a combination thereof.

8. The additive formulation according to claim 7, wherein the carbamate is selected from the group consisting of Iodopropynyl butylcarbamate (IPBC), carbendazim, and a combination thereof.

9. The additive formulation according to claim 7, wherein the isothiazolinone is selected from the group consisting of OIT (2-Octyl-2H-isothiazol-3-one), DCOIT (4,5-Dichloro-2-octyl-4-isothiazolin-3-one), BBIT (N-butyl-1, 2- benzisothiazolin-3-one), and a combination thereof.

10. The additive formulation according to claim 7, wherein the azole is selected from the group consisting of tebuconazole and propiconazole, and a combination thereof.

11. A method of making the additive formulation according to claim 1, the method comprising combining the Quat Silane, the fungicide, in the ratio of the Quat Silane to the fungicide in a range of about 10:1 to about 1:10.

12. The method according to claim 11, the ratio of the Quat Silane to the fungicide in the formulation is in a range of about 5:1 to about 1:5.

13. A method of using comprising:

adding an additive formulation comprising a Quat Silane and a fungicide to a material selected from the group consisting of concrete, a cementitious material, or a combination thereof, wherein the addition results in a reduction or an elimination of microbially induced corrosion.

14. The method of using according to claim 13, wherein the Quat Silane is in a ratio of the Quat Silane to the fungicide in a range of about 10:1 to about 1:10.

15. The method of using according to claim 14, wherein the Quat Silane is in a ratio of the Quat Silane to the fungicide in a range of about 5:1 to about 1:5.

16. The method of using according to claim 13, wherein the addition is to a water-free system.

17. The method of using according to claim 13, wherein the additive formulation further comprises a defoamer.

18. The method of using according to claim 17, wherein the defoamer is selected from the group consisting of polyether amine, ethoxylated alcohol, silicone-based defoamer, tributyl phosphate, and a combination thereof.

19. The method of using according to claim 17, wherein the defoamer is from about 2 weight % to about 25 weight % of the amount of the Quat Silane in the formulation

20. The method of using according to claim 13, wherein the fungicide is selected from the group consisting of Sodium OrthophenylPhenol, Imazalil Sulphate, diiodomethyl-p-tolylsulfone, carbamate, isothiazolinone, azole, chlorothalonil, zinc pyrithione, copper pyrithione, sodium pyrithione, and a combination thereof.

21. The method of using according to claim 20, wherein the carbamate is selected from the group consisting of Iodopropynyl butylcarbamate (IPBC), carbendazim, and a combination thereof.

22. The method of using according to claim 20, wherein the isothiazolinone is selected from the group consisting of OIT (2-Octyl-2H-isothiazol-3-one), DCOIT (4,5-Dichloro-2-octyl-4-isothiazolin-3-one), BBIT (N-butyl-1, 2- benzisothiazolin-3-one), and a combination thereof.

23. The method of using according to claim 20, wherein the azole is selected from the group consisting of tebuconazole and propiconazole; chlorothalonil, diiodomethyl-p-tolylsulfone, zinc pyrithione, copper pyrithione, sodium pyrithione, and a combination thereof.

24. An article comprising:

an additive formulation comprised of a Quat Silane, a fungicide, and a defoamer, and

a material selected from the group consisting of concrete, a cementitious material, and a combination thereof.

25. The article according to claim 24, wherein the Quat Silane is non-aqueous.