Claims

1. A method of coating comprising (i) applying a coating of fireproofing material directly to a substrate, wherein the coating of fireproofing material has a thickness of 1 inch or more, wherein the fireproofing material is a plaster-based or cement-based fireproofing comprising an inorganic binder and aggregate, and wherein the coating of fireproofing material has a water content of at least about 20 wt %; and (ii) applying a uniform coating of a coating composition directly to the coating of fireproofing material, wherein the coating of a coating composition has a thickness between 1 and 6 mils, and wherein the coating composition is a water-based epoxy composition comprising an epoxy resin, and amine hardener and water.

2. The method of claim 1, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 7 days after the fireproofing material is directly applied to the substrate.

3. The method of claim 2, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 5 days after the fireproofing material is directly applied to the substrate.

4. The method of claim 3, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 3 days after the fireproofing material is directly applied to the substrate.

5. The method of claim 4, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 48 hours after the fireproofing material is directly applied to the substrate.

6. The method of claim 5, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 24 hours after the fireproofing material is directly applied to the substrate.

7. The method of claim 6, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 8 hours after the fireproofing material is directly applied to the substrate.

8. The method of claim 7, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 4 hours after the fireproofing material is directly applied to the substrate.

9. The method of claim 8, wherein the uniform coating of a coating composition is directly applied to the coating of fireproofing material within 1 hour after the fireproofing material is directly applied to the substrate.

10. The method of claim 1, wherein the coating of the coating composition has a thickness between 2 and 4 mils.

11. The method of claim 1, wherein the article produced by said method exhibits a water loss of between about 70%-90% when dried at about 73-75˚F. and 30%-40% relative humidity for 7 days.

12. The method of claim 1, wherein the article produced by said method exhibits water ingress of less than 20% when sprayed with water for 3 minutes.

13. An article produced by the method of claim 1.

14. The article of claim 13, which exhibits a water loss of between about 70%-90% when dried at about 73-75˚F. and 30%-40% relative humidity for 7 days.

15. The article of claim 13, which exhibits water ingress of less than 20% when sprayed with water for 3 minutes.

16. The method of claim 1, wherein the epoxy resin is a bisphenol A based epoxy resin

and the amine hardener is an aliphatic polyamine or amido-amine.

17. An article produced by the method of claim 16.