Claims

1. A coating composition comprising an amine-functional polyorganosiloxane having ~~an~~ number average degree of polymerization of 10 or more and an epoxy-functional organosiloxane oligomer, wherein the epoxy-functional organosiloxane oligomer comprises units selected from the group of:

(i) $(R^1R^2R^3SiO_{1/2})_a$

(ii) $(R^1R^3SiO_{2/2})_b$

(iii) $(R^1R^1SiO_{2/2})_c$

(iv) $(R^1SiO_{3/2})_d$

(v) $(R^3SiO_{3/2})_e$, and

(vi) $(SiO_{4/2})_f$

wherein

- each of a, b, c, d, e and f can be independently 0 or an integer;
- the number average of the number of units a+b+c+d+e+f in the epoxy-functional organosiloxane oligomer ranges from 2 to 9;
- the number average of $a+b+e \geq 2$
- the R^1 groups can be the same or different and each represent a monovalent hydrocarbon radical having 1-9 carbon atoms or a C_1-C_6 alkoxy group,
- the R^2 groups can be the same or different and each represent an OH group or a C_1-C_6-alkoxy group,
- the R^3 groups can be the same or different and each represent a monovalent hydrocarbon radical having 1-11 carbon atoms each R^3 group substituted with at least one epoxy group,

wherein an average of least 70% of the units of the epoxy-functional organosiloxane oligomer comprise an R^3 group,

and wherein the amounts of the amine-functional polyorganosiloxane and the epoxy-functional organosiloxane oligomer are such that the ratio of active hydrogen equivalents to epoxy equivalents in the coating composition is between 0.3:1 to 1.1:1.

2. Coating composition according to claim 1 wherein the coating composition has a solids content of at least 70 weight % and/or a volatile organic content (VOC) not exceeding 250 g/l, determined according to EPA Federal Method 24.

3. Coating composition according to claim 1 or claim 2 wherein the amine-functional polyorganosiloxane has an active hydrogen equivalent weight of from 100 to 1,500 g/eq.

4. Coating composition according to any one of the preceding claims, wherein the epoxy equivalent weight of the epoxy-functional siloxane oligomer ranges from 109-430 g/eq.

5. Coating composition according to any one of the preceding claims wherein the coating composition hardens to form a coating in ambient conditions, for example between -5 °C and 50°C.

6. Coating composition according to any one of the preceding claims, wherein the coating composition has a viscosity of less than 15 Poise at 25°C, determined using a cone and plate viscometer in accordance with BS 3900 Part A7 2000 (and/ or ISO 2884-1 1999) with a shear rate of 10,000 s^{-1}.

7. Coating composition according to any one of the preceding claims, wherein the ratio of active hydrogen equivalents to epoxy equivalents in coating composition is greater than 0.6:1 but less than 1:1.

8. Coating composition according to any one of the preceding claims, wherein an average of less than 50% of the silicon atoms in the amine-functional polyorganosiloxane have bound thereon a hydrocarbon group substituted with an amine-functional group.

13. Method of coating a substrate comprising mixing the first and second parts of the coating composition as defined in Claim 12 to form a mixture, applying a layer of the mixture to a substrate, and allowing the layer to harden to form a coating.

14. Use of the coating composition according to any one of claims 1 to 12 as a primer, intermediate, finish or primer/finish coating.

15. Object coated with the coating composition as defined in any one of claims 1 to 12.