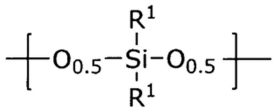
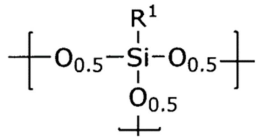
CLAIMS

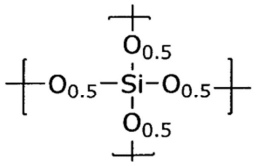
1. A composition for a black matrix comprising:

(I) a black colorant comprising carbon black having a volume average particle diameter of 1 to 300 nm;

(II) a siloxane polymer having repeating units represented by the general formulae (Ia), (Ib) and/or (Ic)


(Ia)


(Ib)


(Ic)

(wherein

R^1 is a linear, branched or cyclic, alkyl group or alkenyl group having 1 to 10 carbon atoms or an aryl group having 6 to 20 carbon atoms, where one or more methylene may be replaced by oxygen, or one or more hydrogen may be replaced by fluorine,

the ratio x of the general formula (Ia) in all of the repeating units is 0 mol% or more and 30 mol% or less, the ratio y of the general formula (Ib) in all of the repeating units is 50 mol% or more and 100 mol% or less, and the ratio z of the general formula (Ic) in all of the repeating units is 0 mol% or more and 30 mol% or less);

(III) surface modified silica fine particles having, on at least a part of the surface, a functional group represented by the general formula (3):

$$-(O)_kSiR^3{}_m(OR^5)_l \qquad (3)$$

(wherein

R^3 represents a linear, branched or cyclic, alkyl group or alkenyl group having 1 to 20 carbon atoms or an aryl group having 6 to 20 carbon atoms, where one or more methylene may be replaced by oxygen, or one or more hydrogen may be replaced by fluorine

R^5 represents hydrogen or an alkyl group having 1 to 10 carbon atoms,

k + l + m = 4, k = 1 to 3, and m = 0 to 3)

and having a volume average particle diameter of 1 to 300 nm;

(IV) a thermal base generator; and

(V) a solvent.

2. The composition according to claim 1, wherein the ratio of the volume average particle diameter of said carbon black to that of said surface modified silica fine particles is 1:0.05 to 1:3.

3. The composition according to claim 1 or 2, wherein the mass ratio of said black colorant to said siloxane polymer is in the range of the black colorant : the siloxane polymer = 10:90 to 50:50.

4. The composition according to any one of claims 1 to 3, wherein the mass ratio of said black colorant to said surface modified silica fine particles is in the range of the black colorant : the surface modified silica fine particles = 10:90 to 90:10.

5. A method for manufacturing a black matrix comprising applying the composition according to any one of claims 1 to 4 and curing.

6. The method according to claim 5 further comprising etching after curing.

7. A black matrix formed by the composition according to any one of claims 1 to 4.