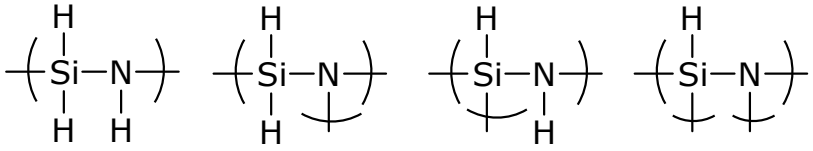
Patent Claims

1. A polysilazane having a ratio of the amount of SiH_3 of 0.055 or more and a ratio of the amount of NH of less than 0.045, based on the amount of aromatic ring hydrogen of xylene when ^1H-NMR of a 17% by mass solution of polysilazane dissolved in xylene is measured,
where the polysilazane has -NH- structure, and
the mass average molecular weight of the polysilazane is 5,000 to 22,000.

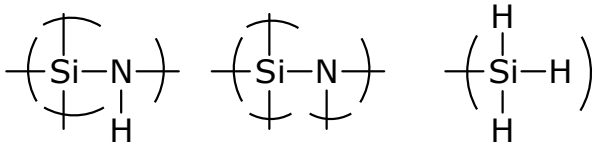
2. The polysilazane according to claim 1, wherein the polysilazane has a ratio of the amount of NH of less than 0.025.

3. The polysilazane according to claim 1 or 2, wherein the polysilazane is perhydropolysilazane.

4. The polysilazane according to any one of claims 1 to 3, comprising at least one of the repeating units selected from the group consisting of the groups represented by the formulae (Ia) to (If), and the terminal group represented by the formula (Ig).



(Ia) (Ib) (Ic) (Id)



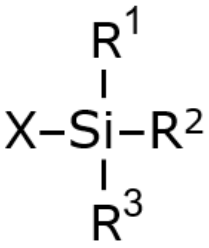
(Ie) (If) (Ig)

5. The polysilazane according to any one of claims 1 to 4, wherein the mass average molecular weight in terms of polystyrene

measured by gel permeation chromatography is 3,000 to 25,000.

6. A siliceous film-forming composition, comprising the polysilazane according to any one of claims 1 to 5, and a solvent.

7. A method for producing the polysilazane according to claim 1, comprising a step of performing a reaction of at least one halosilane compound represented by the formula (1) with ammonia in a solvent having a relative dielectric constant of 10.0 or less at -30 to 50°C.



(1)

(wherein
R^1, R^2 and R^3 are each independently hydrogen, halogen or C_{1-4} alkyl, and
X is each independently F, Cl, Br or I)

8. A method for producing a siliceous film, comprising applying the siliceous film-forming composition according to claim 6 above a substrate and heating it.

9. The method for producing a siliceous film according to claim 8, wherein the heating is performed under a steam atmosphere.

10. A siliceous film produced by the method according to claim 8 or 9.

11. An electronic device comprising the siliceous film produced by the method according to claim 8 or 9.