

ABSTRACT

COPOLYMERIZED POLYSILAZANE, MANUFACTURING METHOD THEREFOR,
COMPOSITION COMPRISING SAME, AND METHOD FOR FORMING SILICEOUS FILM
USING SAME

A copolymerized polysilazane comprising at least repeating units represented by general formula (I): $-\text{Si}(\text{R}^1)(\text{R}^2)-\text{NR}^3-$ and repeating units represented by general formula (II): $-\text{Si}(\text{R}^1)(\text{R}^2)-\text{NH}-$ (in the formulas, R^1 and R^2 each independently represent a hydrogen atom, hydrocarbon group, hydrocarbon group-containing silyl group, hydrocarbon group-containing amino group, or hydrocarbon oxy group, and R^3 represents an alkyl group, alkenyl group, alkoxy group, cycloalkyl group, aryl group or alkyl silyl group), and the $\text{NR}^3/\text{SiH}_{1,2}$ ratio ($\text{SiH}_{1,2}$ represents the total amount of SiH_1 and SiH_2) is 0.005-0.3. Said copolymerized polysilazane can be manufactured by reacting $\text{Si}(\text{R}^1)(\text{R}^2)\text{X}_2$ (in the formula, X represents a halogen atom) with a primary amine compound: R^3NH_2 and then reacting with ammonia, and is able to form a siliceous film that has withstand voltage characteristics and solvent resistance by curing at a low temperature.

(NO FIGURE)