[Claims]

1. A silicon nitride etching liquid composition for producing a 3D non-volatile memory cell, comprising phosphoric acid, one or more kinds of silane coupling agents and water, and not comprising ammonium ions, wherein the silane coupling agent is selected from the group consisting of 3-aminopropyltrimethoxysilane, 3-aminopropyltriethoxysilane, 3-(2-aminoethylamino)propyltrimethoxysilane, 3-(2-aminoethylamino)propyltriethoxysilane, trimethoxy[3-(methylamino)propyl]silane, [3-(N,N-dimethylamino)propyl]trimethoxysilane, trimethoxy[3-(phenylamino)propyl]silane, N-[2-(N-vinylbenzylamino)ethyl]-3-aminopropyltrimethoxysilane, N-[8-(trimethoxysilyl)octyl]ethane-1,2-diamine, N-[3-(trimethoxysilyl)propyl]-1-butaneamine, [3-(diethylamino)propyl]trimethoxysilane, 3-[(1,3-dimethylbutylidene)amino]propyltriethoxysilane, (3-mercaptopropyl)trimethoxysilane, (3-mercaptopropyl)triethoxysilane and N,N-bis[(diphenylphosphino)methyl]-3-(triethoxysilyl)propylamine.

2. The etching liquid composition according to claim 1, comprising 60 to 95 wt% of phosphoric acid and 0.01 to 10 wt% of a silane coupling agent.

3. The etching liquid composition according to any one of claim 1 or 2, further comprising one or more kinds of water soluble polar organic solvents.

4. The etching liquid composition according to claim 3, wherein the water-soluble polar organic solvent is selected from the group consisting of methanol, ethanol and acetone.

5. The etching liquid composition according to any one of claims 1 to 4, further comprising an inorganic silicate.

6. The etching liquid composition according to claim 5, wherein the inorganic silicate is sodium silicate or potassium silicate.

7. A method of producing a 3D non-volatile memory cell, which comprises etching silicon nitride using the etching liquid composition according to any one of claims 1 to 6.