Claims

[Claim 1]

An amorphous silica powder having an average particle size of 20 μm or more and 35 μm or less, wherein a percent retention of 250 μm or more by dry sieving is 5.0% by mass or less, and a number of magnetizable particles having a size of 45 μm or more is zero as measured by the following method:

50 g of an amorphous silica powder and 800 g of ion exchange water are added in a 1000 mL beaker to prepare a slurry; then

the slurry is stirred by a stirring device at a rotation speed of 550 rpm and with reverse rotation at intervals of 5 seconds, while a bar magnet having a length of 150 mm, a diameter of 25 mm, and a magnetic force of 12000 gausses which is covered with a rubber cover having a thickness of 20 μm is immersed therein for 1 minute to capture magnetizable particles; then

the bar magnet capturing the magnetizable particles is removed from the slurry, and the rubber cover is removed from the magnet bar above an empty beaker, and washed with ion exchange water to detach the magnetizable particles, which are then dispersed in water; then

the resulting dispersion is loaded on a suction filtration device equipped with a 25 mm diameter nylon filter (opening 35 μm) to collect the magnetizable

particles on the nylon filter. The nylon filter having the collected magnetizable particles is set on a microscope, and the number of magnetizable particles having a size of 45 μm or more is measured among the magnetizable particles collected on the nylon filter while moving the entire area of the filter at a magnification of 100 times.

[Claim 2]

The amorphous silica powder according to claim 1, wherein a maximum particle size is 75 μm or less.

[Claim 3]

The amorphous silica powder according to claim 1 or 2, wherein an average sphericity of particles having a size of 10 μm or more is 0.80 or more.

[Claim 4]

A method of producing the amorphous silica powder according to any one of claims 1 to 3, comprising the steps of:

using water at 60°C or less to prepare a water slurry having an amorphous silica powder concentration of 40% by mass or less;

circulating the water slurry from bottom to top at a flow rate of 0.2 cm/s or more and 5 cm/s or less through a magnetic separation zone in a circulation line having the magnetic separation zone, in which 10 or more screens having a aperture of 0.5 mm or more and 15 mm or less and each having a magnetic force of 14000 gausses or more are

vertically stacked, to remove magnetizable particles included in the amorphous silica powder; and

feeding a water slurry containing the amorphous silica powder after removal of the magnetizable particles through a center portion of a two-fluid nozzle from a container set to 130°C or higher and 300°C or lower of inside temperature and having the two-fluid nozzle provided at the upper portion, and at the same time injecting dry air through an outer portion of the two-fluid nozzle to spray-dry the slurry at a spray speed of slurry droplets of 50 m/s or more and 250 m/s or less.

[Claim 5]

A resin composition comprising the amorphous silica powder according to any one of claims 1 to 3.

[Claim 6]

A semiconductor sealing material comprising the resin composition according to claim 5.