

Claims:

[Claim 1]

A polishing pad, which comprises a polishing layer comprising a plurality of pores,

wherein the total area of the pores per unit area (mm²) of the polishing surface is 40% to 60%,

the D_q value represented by the following Equation 1 is 5 μm to 15 μm,

the D_{sk} value represented by the following Equation 2 is greater than 0.3 to less than 1, and

the D_{ku} value represented by the following Equation 3 is greater than 1 to less than 5:

[Equation 1]

$$D_q = \sqrt{\frac{\sum_{i=1}^n d_i^2}{n}}$$

[Equation 2]

$$D_{sk} = \frac{1}{nD_q^3} \left(\sum_{i=1}^n d_i^3 \right)$$

[Equation 3]

$$D_{ku} = \frac{1}{nD_q^4} \left(\sum_{i=1}^n d_i^4 \right)$$

in Equations 1 to 3, d is a value obtained by subtracting the number average diameter of the plurality of pores from each pore diameter, and n is the total number of pores per unit area (mm²).

[Claim 2]

The polishing pad of claim 1, wherein n is 700 to 2,500, and d is -30 to 60.

[Claim 3]

The polishing pad of claim 1, wherein, in the diameter distribution of the plurality of pores based on the polishing surface, the number average diameter of the plurality of pores is 15 μm to 25 μm , and the pore diameter at the maximum peak is 10 μm to 150 μm .

[Claim 4]

A process for preparing the polishing pad of claim 1, which comprises mixing a composition comprising a urethane-based prepolymer, a curing agent, and a foaming agent; and

charging and injecting the composition into a mold under a predetermined pressure condition to form a polishing layer.

[Claim 5]

The process for preparing the polishing pad of claim 4, wherein the foaming agent comprises a gas phase foaming agent, a solid phase foaming agent, or both, the solid phase foaming agent has a D50 of 20 μm to 50 μm , and the composition comprises greater than 0.5 part by weight to less than 2.5 parts by weight of the solid phase foaming agent based on 100 parts by weight of the urethane-based prepolymer.

[Claim 6]

A process for preparing the polishing pad of claim 4, wherein the reduced pressure is carried out at a degree of vacuum in a range of 0.6 kgf/cm^2 to less than 1 kgf/cm^2 .

[Claim 7]

A process for preparing a semiconductor device using the polishing pad of claim 1, which comprises mounting the polishing pad comprising a polishing layer comprising a plurality of pores on a platen; and

relatively rotating the polishing surface of the polishing layer and the surface of a wafer while they are in contact with each other to polish the surface of the wafer.