WHAT IS CLAIMED IS:

[Claim 1]. A polishing pad including a polishing layer and a window for end-point detection, wherein the surface roughness (Ra) of the polishing layer and the window for end-point detection has a surface roughness rate of difference change (SRR) represented by the following Equation 1 of 1.9 to 2.5:

[Equation 1]

$$SRR = \frac{dRa1}{dRa2}$$

where,

dRa1 is a surface roughness difference between the polishing layer and the window before polishing, and

dRa2 is a surface roughness difference between the polishing layer and the window measured after supplying a calcined ceria slurry as the polishing layer at 200 mL/min, maintaining a wafer load of 6.0 psi, polishing an oxide film at a speed of 150 rpm for 60 seconds, and polishing 100 wafer sheets under the above conditions.

[Claim 2]. The polishing pad of claim 1, wherein the window for end-point detection has a surface roughness difference (wSRD) represented by the following Equation 2 of 0.3 to 1.5:

[Equation 2]

$wSRD=|Ra_{wi}-Ra_{wf}|$

where,

Ra_{wi} is a surface roughness (Ra) of the window before polishing, and

Ra_{wf} is a surface roughness (Ra) of the window measured after supplying a calcined ceria slurry as the polishing layer at 200 mL/min, maintaining a wafer load of 6.0 psi, polishing an oxide film at a speed of 150 rpm for 60 seconds, and polishing 100 wafer sheets under the above conditions.

[Claim 3]. The polishing pad of claim 1, wherein the surface roughness of the polishing layer has a surface roughness difference (pSRD) value represented by the following Equation 3 of 1 to 4:

[Equation 3]

$$pSRD=|Ra_{pi}-Ra_{pf}|$$

where,

Ra_{pi} is a surface roughness (Ra) of the polishing layer before polishing, and

Ra_{pf} is a surface roughness (Ra) of the polishing layer measured after supplying a calcined ceria slurry as the polishing layer at 200 mL/min, maintaining a wafer load of 6.0 psi, polishing an oxide film at a speed of 150 rpm for 60 seconds, and polishing 100 wafer sheets under the above conditions.

[Claim 4]. The polishing pad of claim 1, wherein the window includes a cured product obtained by curing a window composition comprising a urethane-based prepolymer and a curing agent.

[Claim 5]. The polishing pad of claim 4, wherein the urethane-based prepolymer has an unreacted NCO% of 8% by weight to 10% by weight.

[Claim 6]. The polishing pad of claim 1, wherein the polishing layer contains

a cured product obtained by curing a polishing composition comprising a urethane-based prepolymer, a curing agent, and a foaming agent.

[Claim 7]. A method for manufacturing a polishing pad, the method comprising steps of:

i) preparing a urethane-based prepolymer composition;

ii) preparing a composition for window manufacturing comprising the prepolymer composition and a curing agent;

iii) manufacturing a window by curing the composition for window manufacturing; and

iv) forming a through-hole in a polishing layer, forming the window of the step iii), and inserting and adhering the formed window to the through-hole,

wherein the surface roughness (Ra) of the polishing layer and the window for end-point detection has a surface roughness rate of difference change (SRR) represented by the following Equation 1 of 1.9 to 2.5:

[Equation 1]

$$SRR = \frac{dRa1}{dRa2}$$

where,

dRa1 is a surface roughness difference between the polishing layer and the window before polishing, and

dRa2 is a surface roughness difference between the polishing layer and the window measured after supplying a calcined ceria slurry as the polishing layer at 200 mL/min, maintaining a wafer load of 6.0 psi, polishing an oxide film at a speed of 150 rpm

for 60 seconds, and polishing 100 wafer sheets under the above conditions.

[Claim 8]. The method of claim 7, wherein the step iv) of forming the window comprises primarily forming the thickness of the cured window sheet by using a bite having a curvature of 0.3 to 5 mm at a corner portion thereof and performing secondary forming with an embossed mold.

[Claim 9]. The method of claim 8, wherein the bite is a PCD bite.

[Claim 10]. A method for manufacturing a semiconductor device, the method comprising steps of:

1) providing a polishing pad including a polishing layer and a window for end-point detection;

2) polishing the semiconductor substrate while rotating the semiconductor substrate relative to the polishing layer so that a surface to be polished of a semiconductor substrate is in contact with a polishing surface of the polishing layer; and

3) detecting the thickness of the semiconductor substrate through the window for end-point detection in the polishing pad and detecting the end point of the polishing process,

wherein the surface roughness (Ra) of the polishing layer and the window for end-point detection has a surface roughness rate of difference change (SRR) represented by the following Equation 1 of 1.9 to 2.5:

[Equation 1]

$$SRR = \frac{dRa1}{dRa2}$$

where,

dRa1 is a surface roughness difference between the polishing layer and the window before polishing, and

dRa2 is a surface roughness difference between the polishing layer and the window measured after supplying a calcined ceria slurry as the polishing layer at 200 mL/min, maintaining a wafer load of 6.0 psi, polishing an oxide film at a speed of 150 rpm for 60 seconds, and polishing 100 wafer sheets under the above conditions.