

POLISHING COMPOSITION AND POLISHING PROCESS

ABSTRACT

To provide a polishing composition particularly useful for an application to polish a conductor layer made of copper in a semiconductor wiring process, and a
5 polishing process employing it.

A polishing composition comprising an anionic surfactant and a nonionic surfactant, characterized in that the composition is prepared so that the water contact angle of the surface of an object to be polished,
10 after being polished by the composition, would be at most 60°. Particularly, a polishing composition having a pH of from 2 to 9 and comprising at least one anionic surfactant represented by the chemical formula R1-Y1' or R1-X1-Y1', wherein R1 is an alkyl group, an alkylphenyl
15 group or an alkenyl group, X1 is a polyoxyethylene group, a polyoxypropylene group or a poly(oxyethylene-oxypropylene) group, and Y1' is a SO₃M1 group or a SO₄M1, wherein M1 is a counter ion, a protection film forming agent different from the anionic surfactant, and at least
20 one nonionic surfactant represented by the chemical formula R2-X2, wherein R2 is an alkyl group, and X2 is a polyoxyethylene group, a polyoxypropylene group or a poly(oxyethylene-oxypropylene) group, and having a HLB value of from 10 to 16.

Fig.1(a) to Fig.1(d)