ABSTRACT

A semiconductor polishing compound comprising cerium oxide abrasive grains, water and an additive, wherein the additive is a water-soluble organic polymer such as ammonium polyacrylate or an anionic surfactant, the pH at 25°C is from 3.5 to 6, and the concentration of the additive is from 0.01 to 0.5% based on the total mass of the polishing compound. This polishing compound simultaneously has dispersion stability, excellent scratch characteristics and excellent polishing planarization characteristics. In particular, this polishing compound provides excellent planarization characteristics having dishing fluctuation reduced, when used for polishing a semiconductor substrate having a silicon nitride film 3 and a silicon oxide film 2 formed on a silicon substrate 1. Further, the time for polishing a pattern wafer can be shortened by using this polishing compound.