ABSTRACT

An object of the present invention is to provide an etching treatment agent which can suppress an influence over a resist pattern and can etch onto insulating film with high speed.

An etchant for etching treatment onto insulting film with a resist as a mask formed on a substrate, which contains 8 through 19 weight % of hydrofluoric acid and 12 to 42 weight % of ammonium fluoride, and has hydrogen ion concentration of $10^{-6.0}$ through $10^{-1.8}$ mol/L. Further, an etchant for etching treatment onto silicon oxide film with a resist as a mask formed on a substrate, of which etching speed to the silicon oxide film is 200 nm/min or more and a film reduction rate of the resist is 50 nm/min or less.