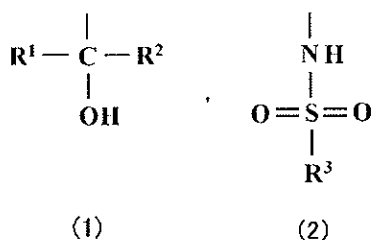


ABSTRACT

A resin composition for forming a top coat which can be formed on a photoresist film without causing intermixing with the photoresist film, can maintain a stable film coating which is not eluted into a medium during immersion lithography, does not
 5 impair pattern profiles during dry exposure (which is not immersion lithography), and can be easily dissolved in an alkaline developer. The resin is a copolymer which comprises at least one recurring unit (I) selected from the group consisting of a recurring unit having a group shown by the following formula (1), a recurring unit having a group shown by the following formula (2), and a recurring unit having a
 10 carboxyl group, and a recurring unit (II) having a sulfo group, the copolymer having a weight average molecular weight determined by gel permeation chromatography of 2,000 to 100,000,



15

wherein at least one of R^1 and R^2 is a fluoroalkyl group having 1 to 4 carbon atoms and R^3 in the formula (2) represents a fluoroalkyl group having 1 to 20 carbon atoms.