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(54) Title: SILSESQUOXANE RESINS

(57) Abstract: Silsesquioxane resins useful in antireflective coatings wherein the silsesquioxane resin has the formula: $(\text{PhSiO}_{(3-x)/2}(\text{OR}')_x)_m(\text{HSiO}_{(3-x)/2}(\text{OR}')_x)_n(\text{MeSiO}_{(3-x)/2}(\text{OR}')_x)_o(\text{RSiO}_{(3-x)/2}(\text{OR}')_x)_p(\text{R}^2\text{SiO}_{(3-x)/2}(\text{OR}')_x)_q$ where Ph is a phenyl group, Me is a methyl group; R is selected from a sulfur-containing organic functional group; R' is hydrogen atom or a hydrocarbon group having from 1 to 4 carbon atoms; R² is selected from ester groups, polyeiher groups; and polyethylene oxide groups; x has a value of 0, 1 or 2; m has a value of 0.01 to 0.97; n has a value of 0.01 to 0.97; o has a value of 0.01 to 0.97; p has a value of 0.01 to 0.97; q has a value of 0 to 0.96; and m + n + o + p + q ≈ 1.



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