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(54) Title: FLUOROCARBON-GRAFTED POLYSILOXANES

(57) Abstract: A composition useful to provide oil repellency, water repellency, and stain resistance to substrates comprising a polymer prepared by contacting a polyfluoroalkyl sulfonyl halide with a compound of Formula II: $(E-(O)_q)_3Si-O-(Si(R^2)_2-O)_m[Si(R^3-NHR^4)(R^2)O]_n-Si-((O)_q-E)_3$, Formula III: $HR^4N-R^3-Si(R^2)_2-O-[Si(R^2)_2-O]_m[Si(R^3-NHR^4)(R^2)O]_n-Si-(R^2)_2-R^3-NHR^4$ or Formula IV: $HR^4N-R^3-Si(R^2)_2-O-[Si(R^2)_2-O]_mSi-((O)_q-E)_3$, wherein each R^2 is independently a C_1 to C_8 alkyl, each R^3 is independently a divalent group containing carbon, oxygen, and optionally at least one of nitrogen oxygen and sulfur, each R^4 is independently H or C_1 to C_8 alkyl, each E is independently a C_1 to C_8 branched or linear alkyl, each q is independently zero or 1, m is a positive integer, and n is independently zero or a positive integer, such that $n/(m+n)$ is zero or a positive fraction having a value up to about 0.7, and the polymer viscosity is less than or equal to 10000 mPa.s under a shear rate of $0.1\ s^{-1}$ at a temperature of 20° C.

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