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(54) Title: FLUOROALKYL SILANES

(57) Abstract: Fluoroalkyl silanes are a class of compounds useful for various industrial purposes. For example, fluoroalkyl silanes which have hydrolysable groups (called hydrolysable fluoroalkyl silanes), are compounds useful as surface treatment agents which provide durable hydrophobic and oleophobic coatings. In general, hydrolysable fluoroalkyl silanes can be represented with the following formula: (RO-)sSi-Rτ wherein R is H or an alkyl; and RT is a monovalent organic compound terminated by a perfluoroalkyl group. When used to coat a surface, the (RO-)3 moiety reacts (via hydrolysis) with various chemical groups of the surface (e.g., hydroxyl, amine, or other reactive groups) thereby bonding the fluoroalkyl silane to the surface. The RT moiety comprises a divalent organic linking group which links the silicon atom to a terminal group rich in fluorine atoms whose unique electronic properties impart desirable hydrophobic and oleophobic properties in a surface coating. Modification of the RT moiety is useful in the engineering of fluoroalkyl silanes. The present invention provides for fluoroalkyl silanes having Rτ moieties which have not been heretofore considered.



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