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(54) Title: UREA (MULTI)-URETHANE (METH)ACRYLATE-SILANE COMPOSITIONS AND ARTICLES INCLUDING THE SAME

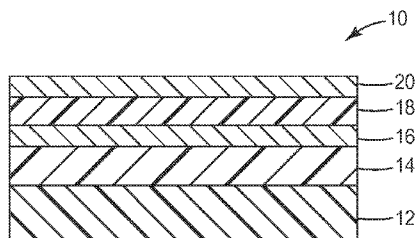


Fig. 1

(57) Abstract: Compositions of matter described as urea (multi)-urethane (meth)acrylate-silanes having the general formula $R_A-NH-C(O)-N(R^4)-R^{11}-[O-C(O)NH-R_S]_n$, or $R_S-NH-C(O)-N(R^4)-R^{11}-[O-C(O)NH-R_A]_n$. Also described are articles including a substrate, a base (co)polymer layer on a major surface of the substrate, an oxide layer on the base (co)polymer layer; and a protective (co)polymer layer on the oxide layer, the protective (co)polymer layer including the reaction product of at least one urea (multi) urethane (meth)acrylate-silane precursor compound. The substrate may be a (co)polymer film or an electronic device such as an organic light emitting device, electrophoretic light emitting device, liquid crystal display, thin film transistor, or combination thereof. Methods of making such urea (multi)-urethane (meth)acrylate-silane precursor compounds, and their use in composite films and electronic devices are also described. Methods of using multilayer composite films as barrier films in articles selected from solid state lighting devices, display devices, and photovoltaic devices are also described.