

Title (en)
FLAME RETARDANT

Title (de)
FLAMMSCHUTZMITTEL

Title (fr)
AGENTS IGNIFUGES

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Abstract (en)
[origin: WO2011095552A1] The invention relates to phosphine sulfide derivatives of formula (I), $S=PR_1R_2R_3$ (I) which are suitable as flame retardants, in particular for polymers, wherein the symbols in formula (I) have the following meanings: R_1 , R_2 are identically or differently C1-C12-alkyl, C3-C8-cycloalkyl, which is unsubstituted or substituted by one or more C1-C4-alkyl groups, C2-C12-alkenyl, C2-C12-alkinyl, C6-C10-aryl, C6-C10-aryl-C1-C4-alkyl; R_3 is H, SH, SR_4 , OH, OR_5 or a group: $-(Y_1)_n-P(=X_1)R_6-(Y_2)_m-P(=X_2)R_7R_8$; or two groups R_1 , R_2 , R_3 together with the phosphorus atom to which they are bound form a ring system; X_1 , X_2 are identically or differently O or S; Y_1 , Y_2 are identically or differently O or S; R_4 , R_5 , R_6 , R_7 , R_8 are independently of each other identically or differently C1-C12-alkyl, C3-C8-cycloalkyl, which is unsubstituted or substituted by one or more C1-C4-alkyl groups, C2-C12-alkenyl, C2-C12-alkinyl, C6-C10-aryl or C6-C10-aryl C1-C4-alkyl; n is 1 if Y_1 or Y_2 is O, and 1, 2, 3, 4, 5, 6, 7 or 8 if Y_1 or Y_2 is S, and m is a whole number between 0 and 100.

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