

Title (en)
HALOGEN-FREE, PHOSPHOROUS-CONTAINING, FLAME-PROTECTED POLYMER FOAMS

Title (de)
HALOGENFREIE, PHOSPHORHALTIGE FLAMMGESCHÜTZTE POLYMERSCHAUMSTOFFE

Title (fr)
MOUSSES POLYMÈRES IGNIFUGÉES CONTENANT DU PHOSPHORE ET EXEMPTES D'HALOGENE

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Application
EP 11703640 A 20110203

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Abstract (en)
[origin: WO2011095540A2] The invention relates to a polymer foam having a density in the range between 5 and 120 kg/m³, containing a) a polymer component, containing at least one styrene polymer, b) 0.1 to 5 parts by weight (relative to 100 parts by weight of component a)) of a flame retardant mixture, containing b1) at least one phosphorus compound of formula (I) having a phosphorus content in the range between 5 and 80% by weight, relative to the phosphorus compound, (X1)_s = PR₁R₂R₃ (I), where the symbols and indices in formula (I) have the following meanings: R₁ is C1-C16-alkyl, C1-C10-hydroxyalkyl, C2-C16-alkenyl, C1-C16-alkoxy, C2-C16-alkenoxy, C3-C10-cycloalkyl, C3-C10-cycloalkoxy, C6-C10-aryl, C6-C10-aryloxy, C6-C10-aryl-C1-C16-alkyl, C6-C10-aryl-C1-C16-alkoxy, SR₉, COR₁₀, COOR₁₁, CONR₁₂R₁₃; R₂ is C1-C16-alkyl, C1-C10-hydroxyalkyl, C2-C16-alkenyl, C1-C16-alkoxy, C2-C16-alkenoxy, C3-C10-cycloalkyl, C3-C10-cycloalkoxy, C6-C10-aryl, C6-C10-aryl-C1-C16-alkyl, C6-C10-aryl-C1-C16-alkoxy, SR₉, COR₁₀, COOR₁₁, CONR₁₂R₁₃; R₃ is H, SH, SR₄, OH, OR₅ or a group 30 -(Y₁)_n-[P(= X₂)_uR₆ - (Y₂)_n]-P(= X₃)_tR₇R₈; or two groups R₁, R₂, R₃ together with the phosphorus atom to which they are bound form a ring system; X₁, X₂ and X₃ are independently of each other identically or differently O or S; Y₁, Y₂ are identically or differently O or S; R₄, R₅, R₉, R₁₀, R₁₁, R₁₂, R₁₃ 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 or C6-C10-aryl C1-C4-alkyl; R₆, R₇, R₈ are independently of each other identically or differently C1-C16-alkyl, C1-C16-alkenyl, C1-C16-alkoxy, C1-C16-alkenoxy, C3-C10-cycloalkyl, C3-C10-cycloalkoxy, C6-C10-aryl, C6-C10-aryloxy, C6-C10-aryl-C1-C16-alkyl, C6-C10-aryl-C1-C16-alkoxy, SR₉, COR₁₀, COOR₁₁, CONR₁₂R₁₃; n is 1, if Y₁ or Y₂ is O, and 1, 2, 3, 4, 5, 6, 7 or 8, if Y₁ or Y₂ is S; m is a whole number between 0 and 100; s, t and u are independently of each other 0 or 1; and b2) elementary sulphur.

IPC 8 full level
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