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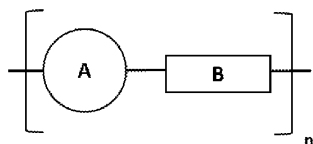
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(54) Title: POLYMERIC FLAME RETARDANT SYNERGIST AND THE METHOD OF PRODUCING IT AND ITS FORMULATION FOR POLYAMIDES



(57) Abstract: Herein disclosed is a flame retardant synergist comprising a repeating unit comprising a backbone represented by a formula of: wherein moiety A is derived from a substituted triazine having at least two amino groups, wherein moiety B is derived from a dialdehyde having a terminal aldehyde, wherein moiety A and moiety B are bonded via a -C-N- linkage formed from having one of the at least two amino groups reacted with the terminal aldehyde, wherein n ranges from 5 to 1000, and one or more side units extending from the backbone, wherein the one or more side units are derived from 9,10-dihydro-9-oxa-10-phosphaphenanthrene 10-oxide or a derivative thereof. A flame retardant polymer composite comprising a polymer, the flame retardant synergist, and a flame retardant additive, is also disclosed herein. Methods of forming the flame retardant synergist and the flame retardant polymer composite are further disclosed herein.

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