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PRECERAMIC ADDITIVES AS FIRE RETARDANTS FOR PLASTICS

Statement of Government Interest

FIELD OF THE INVENTION

This invention relates to fire retardants for plastics particularly preceramic additives as fire retardants for plastics and fire retardant blends of such additives and plastics.

BACKGROUND OF THE INVENTION

Current fire retardants have a number of problems depending on the system. Halogen based fire retardants (which may produce toxic and corrosive combustion products) and phosphorus based fire retardants increase the amount of carbon monoxide and smoke during combustion (by five to ten times), hydrates (e.g. ATH, aluminum trihydrate) which decompose by an endothermic process to produce water, must be used at such high loadings that (40-70% wt) the physical properties of the base polymer are excessively compromised. New fire retardants are needed that do not have these shortcomings. This is especially important for US companies trying to sell products in