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(71) Applicant: LANXESS SOLUTIONS US INC. [US/US];

2 Armstrong Road, Shelton, CT 06484 (US).

(72) Inventors: BONYHADY, Simon, J.; 34 Taft Pointe, Unit

73, Waterbury, CT 06708 (US). LEE, Julia, Yue; 270

Spring St., Apt. 14, Naugatuck, CT 06770 (US). HE,

Qingliang; 250 Harrison Rd., Cheshire, CT 06410 (US).

SHARMA, Ramesh; 70 Ridgeview Place, Cheshire, CT

06410 (US).

(74) Agent: MCDAVID, Christopher, L.; Lanxess Solutions

US Inc., 2 Armstrong Road, Shelton, CT 06484 (US).

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(54) Title: METHOD OF PREPARING PHOSPHORUS-CONTAINING FLAME RETARDANTS AND THEIR USE IN POLYMER COMPOSITIONS

(57) Abstract: A phosphorus-containing flame retardant is produced by reacting at a reaction temperature a mixture including a metal or suitable metal compound and a stoichiometric excess relative to the metal or suitable metal compound of an unsubstituted or alkyl or aryl substituted phosphonic or pyrophosphonic acid, wherein the phosphonic or pyrophosphonic acid is in a molten state at the reaction temperature. The chemical composition of the resulting flame retardant product leads to excellent flame retardancy and exhibits high thermal stability. The presently disclosed flame retardants are useful, for example, in polymer compositions, particularly thermoplastics processed at high temperatures, over a wide range of applications.



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