

Research of burning, ignition and microstructure of cocrystals on the basis of ammonium nitrate

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Abstract

In article results of research ignition and burning of cocrystals on the basis of ammonium nitrate and polar polymers in the conditions of a manometrical bomb and the device of constant pressure are presented. Influence of a ratio of components, type of polymer, the catalyst and burning modifiers for the period of an ignition delay is investigated. The microstructure cocrystals is investigated. By the carried-out researches it is shown that cocrystals are characterized by higher speed of the burning, the best ignition, and at their burning more high pressures, in comparison with mechanical mixes are realized. Comparison of characteristics of samples cocrystals is also given in a various condition (pressed, a crumb, a powder). The comparative assessment of parameters ignition and burning of cocrystals with smoky gunpowder, ballistic fuel and guanilyurea dinitramide is given.