

Cocrystals on the basis of ammonium nitrate

© Vladimir N. Popok

Joint Stock Company «Federal Research and Production Center «ALTAI». Sotsialisticheskaya St., 1. Biysk, 659322. Altai Territory. Russia. Phone: +7 (3854) 30-19-37. E-mails: vnpopok@mail.ru

Keywords: ammonium nitrate, polymers, cocrystals, thermal decomposition, burning, phase stabilization, sensitivity to mechanical influences.

Abstract

Results of researches of the cocrystals containing ammonium nitrate are presented in article. It is established that cocrystals of nitrate of ammonium with polyvinylpyrrolidone, polyvinyl alcohol, metylpolivinyltetrazol, gelatin do not melt before thermal decomposition. Cocrystals are characterized by higher parameters of safety, low value of extreme pressure of ignition and burning, high speed of burning, a low formation of condensed products of combustion in comparison with mechanical mixes, similar on structure.