

Agglomeration morphology of HMX surface in cooling crystallization processes

정재욱, 김두용, 김현수¹, 김광주*
한밭대학교; ¹국방과학연구소
(kjkim@hanbat.ac.kr*)

One sensitive explosive, HMX(cyclotetramethylene tetranitramine), has been used as a civilian construction and as a component of rocket propellants in the army. The explosion performance of HMX is high, but it is sensitive to heat and shock. Thus the stability of HMX must be improved while maintaining explosion performance. The sensitive explosive HMX was coated with the less sensitive explosive NTO (3-nitro-1,2,4-triazole-5-one) by cooling crystallization. Experimental was conducted in a batch cooling crytallizer under various conditions. Nucleation and growth was analyzed during cooling crystallization.