

Coating on the HMX particles using evaporation method

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The sensitive explosive, HMX (Cyclotetramethylene tetranitramine) required a post-treatment (e.g. coating with non-sensitive explosives, control size and shape) to reduce sensitivity as well as to preserve explosion performance. In this study, HMX was coated with non-sensitive explosive, NTO (3-nitro-1,2,4-triazole-5-one) in batch cooling crystallizer. A Coating phenomenon by the crystallization is elucidated as the agglomeration mechanism. The surface morphology of HMX coating is investigated by operating conditions. Finally the optimum conditions are experimentally found to achieve thin and uniform surface of HMX coating.