Solubility of DNAM in the organic solvents

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Solid oxidizing agent to be used in the propulsion agent or explosives for solid rocket must have the appropriate the morphology and crystal size distribution in order to satisfy the physical properties such as the purity, stability, density and combustion efficiency . So it is necessary to improve the performance for desired objectives.
Since the DNAM has low sensitivity, it offers propulsion or explosive in the internal combustion engine, and it's the oxygen balance is much better than the PSAN and HTPB.
The solubility is the most important and basic parameter in crystallization process. Prior to crystallization process, it is requirement to measure solubility. Solubility of the material determines the solvent, crystallization method, and experiment condition.
We measured the basic properties of DNAM, such as solubility, TGA, DSC, SEM, XRD, and Raman spectroscopy. The solvents for solubility of DNAM is DMSO, NMP, DMF, DMAC, THF, EA and ACT. In this study, we figured out the appropriate solvent using crystallization.