

## Technology of Ultra-fine RDX Coating with Rapid Expansion of Supercritical Solution Method

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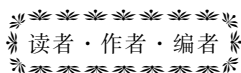
**Abstract:** Ultra-fine RDX was coated with FPM<sub>2602</sub> by Rapid Expansion of Supercritical Solutions method (RESS). The influence of factors, such as different system temperature, the system pressure, solution concentration and the molding on the coated RDX powder were studied. And the impact sensitivity of coated RDX was tested. Results indicate that the FPM<sub>2602</sub> in the RDX powder bonded together with poor dispersivity when system temperature was above 45 °C. The size of RDX powder is increased when the concentration of FPM<sub>2602</sub> is above 0.3 g/mL. There are not completely granular surface coated of RDX when the system pressure reduce to 12 MPa below. The optimum technology condition are as follow: the system temperature was 40 °C, the concentration of FPM<sub>2602</sub> is 0.3 g/mL, the system pressure is 14 MPa. The value of characteristics height  $H_{50}$  for coated samples is higher than that of ultra-fine RDX ( $H_{50} = 25.2$  cm) 9.48 cm.

**Key words:** material science; Supercritical RESS method technology; composite energetic material; impact sensitivity

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