

A Study for the Formulation Design of Plastic Bonded Explosives

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The selection of desensitizer is crucial in the formulation study of PBX. In this work, the influences of physicochemical properties between RDX and binders such as interfacial tension (r_{SL}), melt latent heat (Q_m) and density (ρ) on impact sensitivity of PBX were investigated. As experimental results, the interfacial tension is the major factor of influence on impact sensitivity and the rest are the minor factors. The correlation coefficient of impact sensitivity (H_{50}) versus r_{SL} is 0.957 by LSM linear fittings.