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**Disc Acceleration Experiments for Blends of High Explosive Composites** ROBERT REEVES, BRADLEY WHITE, ERIC BUKOVSKY, MARCOS CHAOS, DENIS RICHARD, Lawrence Livermore Natl Lab — A basic goal of high explosive (HE) formulation is the development of a composite materials that combines the properties of its constituents to meet a specific need. Typically, this is done with a single HE and a binder system to create a mechanically-stable, energetic material. However, it may be useful to blend higher and lower performance HEs to finely tune the detonative, thermal, and safety properties of the composite. In this study, disc acceleration experiments (DAX) were performed on HMX-based explosives, TATB-based explosives, and several mixtures of the two. Experiments were performed at two sizes, as well, to investigate possible size effects on the detonative behavior of the lower-energy content mixtures. The detonation velocity and velocity of the produced flyer are presented as a function of composition. Experimental results are compared to simulations using models developed using CHEETAH. This work was performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344. LLNL-ABS-768458

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