

Abstract Submitted  
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**An Equation of State for Polymethylpentene (TPX) including Multi-Shock Response** TARIQ ASLAM, RICHARD GUSTAVSEN, NATHANIEL SANCHEZ, BRIAN BARTRAM, Los Alamos National Laboratory — The equation of state (EOS) of polymethylpentene (TPX) is examined through both single shock Hugoniot data as well as more recent multi-shock compression and release experiments. Results from the recent multi-shock experiments on LANL's 2-stage gas gun will be presented. A simple conservative Lagrangian numerical scheme utilizing total-variation-diminishing interpolation and an approximate Riemann solver will be presented as well as the methodology of calibration. It is shown that a simple Mie-Gruneisen EOS based off a Keane fitting form for the isentrope can replicate both the single shock and multi-shock experiments.

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