

Abstract Submitted
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An Equation of State for Polyurea Aerogel Based on Multi-Shock Response TARIQ ASLAM, Los Alamos National Laboratory, DIANA SCHROEN, Sandia National Laboratory, RICHARD GUSTAVSEN, BRIAN BARTRAM, Los Alamos National Laboratory — The methodology for making foamed Divinylbenzene (DVB) is described. For a variety of initial densities, foamed DVB is examined through multi-shock compression and release experiments. Results from 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 has been previously demonstrated that a single Mie-Gruneisen fitting form can replicate foam multi-shock compression response at a variety of initial densities; such a methodology will be presented for foamed DVB.

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