

Abstract Submitted
for the SHOCK07 Meeting of
The American Physical Society

Shock Induced Equation of State of Polyvinylchloride SIAN BUTLER, JEREMY MILLETT, AWE, Aldermaston, NEIL BOURNE, University of Manchester — The shock response of the common industrial polymer, polyvinylchloride (PVC) has been investigated by measurements of stress, shock velocity and particle velocity through embedded manganin stress gauges. Results in terms of shock and particle velocity show close agreement with established data within the literature. Stress measurements show an increasing difference with literature pressure values, but the calculated hydrodynamic pressure is in agreement with the literature. This suggests that the shear strength of PVC has a strong positive shock stress dependence.

Jeremy Millett
AWE, Aldermaston

Date submitted: 20 Feb 2007

Electronic form version 1.4