Abstract Submitted for the SHOCK05 Meeting of The American Physical Society

Shear Strength Measurements in a Shock Loaded Alumina-Filled Epoxy Resin K. KOS, AWE, J.C.F. MILLETT, Cranfield University, N.K. BOURNE, University of Manchester, D. DEAS, AWE — The variation of shear strength with impact stress in an alumina-filled epoxy has been measured with lateral stress gauges. At lower stresses, a degree of hardening behind the shock front has been observed, which decreases as impact stress increases. It is believed that this is due to a transition from a viscous response dominated by the epoxy matrix, to a more viscoplastic response. The measured shear strength has also been observed to reach a near constant level, as was suggested in a previous work.

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Date submitted: 07 Apr 2005

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