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**The Shock Induced Shear Strength of Polyoxymethylene and Polyethylene** STEPHEN GOVEAS, JEREMY MILLETT, AWE Plc, NEIL BOURNE, University of Manchester — In the past few years, a series of papers has examined the shock response of common engineering polymers in terms of their microstructure. In this latest work, the behaviours of two polymers, polyoxymethylene and polyethylene, are investigated under conditions of one-dimensional strain. The study focuses on the experimentally determined lateral component of stress and, from knowledge of the impact conditions, the shear strength. Variations with impact stress amplitude and pulse duration are discussed in terms of the polymer chain structure.

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