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On the shock response of Kel-F 81 DAVID WOOD, GARETH APPLEBY-THOMAS, BRIANNA FITZMAURICE, AMER HAMEED, Cranfield University, JEREMY MILLETT, AWE, PAUL HAZELL, The University of New South Wales — The polymeric material Kel-F (PCTFE) has found a useful niche in explosive research due to the similar in its density to that used of polymers used in explosive binders. Consequently, it is often employed as an explosive simulant material. Knowledge of shock propagation in explosives is of paramount importance from a safety perspective–both in terms of reaction to a designed stimulus and to off-normal (accident) events. To this end, as part of a more general investigation into the relationship between polymeric structure and high strain-rate response, in this paper the dynamic response of Kel-F 81 has been investigated via a series of plate-impact experiments.

David Wood
Cranfield University

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