

Abstract Submitted
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High-rate experiments on a nitrocellulose/nitroglycerine propellant NICHOLAS TAYLOR, DAVID WILLIAMSON, University of Cambridge, PETER GOULD, IAN CULLIS, Qinetiq — The mechanical behaviour of a rubbery nitrocellulose/nitroglycerine double-base propellant was probed at a range of strain rates. The propellant was relatively soft, and inhomogeneous on the millimetre scale, presenting a few experimental difficulties. Techniques for overcoming these difficulties in split Hopkinson pressure bar and plate impact experiments are presented, along with the results of these experiments at a range of temperatures.

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