

Abstract Submitted
for the SHOCK05 Meeting of
The American Physical Society

Fracture studies of three PBX mock materials STEWART PALMER, DAVID WILLIAMSON, WILLIAM PROUD, University of Cambridge, Cavendish Laboratory, Madingley Road, Cambridge, UK. CB3 0HE — Fracture studies have been performed on three mock PBX materials; PBS 9501 which consists of sugar bound in Estane and is a mock of PBX 9501. EDC1037 and EDC1032 which consist of barium sulphate and melamine bound in NC/K10 and Viton-A respectively, and are mocks to EDC37 and EDC32. The effect of microstructure, geometry and testing rate are investigated, and the applicability of elastic-plastic fracture mechanics is considered. Such data are required for the development and validation of accurate models of PBX failure. This paper outlines the current state of research and details the important observations to date.

David Williamson
University of Cambridge, Cavendish Laboratory, Madingley Road
Cambridge, UK. CB3 0HE

Date submitted: 07 Apr 2005

Electronic form version 1.4