

Abstract Submitted
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Characterization of epoxy-based encapsulents JAMES WILGEROTH, AMNAH KHAN, JENS BALZER, Imperial College London, INSTITUTE OF SHOCK PHYSICS TEAM — A range of experiments have been performed in order to investigate the effects of strain-rate on the compressive response of both an epoxy resin and an epoxy-based syntactic foam. Strain-rates ranging from the quasi-static (10^{-4} s^{-1}) to dynamic (10^3 s^{-1}) regime have been investigated using an Instron 5584 Universal Testing Machine and Split-Hopkinson Pressure Bar (SHPB) apparatus. The effects of temperature (-20 to 80°C) on the compressive response of the materials have also been investigated. Finally, the experimental results are discussed with reference to the wider challenge of numerical simulation.

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