Abstract Submitted for the SHOCK05 Meeting of The American Physical Society

The Dynamic Behaviour of Micro-Concrete K. TSEMBELIS, W.G. PROUD, PCS, Cavendish Laboratory, Madingley Road, Cambridge, CB3 0HE, UK — A series of plate impact experiments has been performed to assess the dynamic behaviour of micro-concrete (70% crushed dolerite and 30% cement paste by weight) in both longitudinal and lateral directions. Information was obtained for the Hugoniot curve and dynamic shear stress properties. Hugoniot results are compared with published data on cement paste, mortar and concrete from the UK, Germany and the US. Furthermore, the shear strength of micro-concrete is compared to the cement paste where very small differences are observed. Therefore, the shear strength appears to be independent of the aggregates and only depends on the matrix material.

Konstantinos Tsembelis PCS, Cavendish Laboratory, Madingley Road, Cambridge, CB3 0HE, UK

Date submitted: 06 Apr 2005 Electronic form version 1.4