

Abstract Submitted
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Thermodynamic work of adhesion between HMX and a UK PBX binder system DAVID WILLIAMSON, STUART PALMER, University of Cambridge, WILLIAM PROUD, REBECCA GOVIER, AWE, SMF GROUP TEAM, AWE TEAM — The polar and dispersive components of the surface energy of a UK PBX's binder system have been measured using the Wilhelmy plate technique. These data can be combined with the known values for HMX to give the so-called Thermodynamic Work of Adhesion (TWA) between the two. This quantity represents the intrinsic amount of energy required to create new surface. This can be compared to the so-called Measured Work of Adhesion (MWA), which represents the total amount of energy required for debonding, i.e. TWA plus energy dissipated during deformation, which has previously been reported for this system.

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