

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: Rupture with pressure and shear shock fronts. The temporal evolution of the full-field volumetric strain rate, $|\dot{\epsilon}|$, is shown for the experiment with PMMA discussed in the text ($P = 21$ MPa, $\alpha = 29^\circ$), with a field of view of 128×80 mm². The time is in microseconds and starts at the rupture nucleation. The movie displays the rupture progression as it develops from left to right in the positive x_1 -direction. The formation of both the pressure and the shear shock fronts is visible in the early frames ($t < 42$ μ s), and becomes well developed as the rupture advances ($t \geq 42$ μ s). The upper half-portion of the pressure shock front is extensional, while the lower portion is compressional, in accordance with the rightwards propagation of the left-lateral in-plane shear rupture. A snapshot taken from this sequence, at $t = 58$ μ s, is reported in Fig. 2c. The presence of both the pressure and shear shock fronts indicates the supersonic nature of the rupture.