

# Experimental study of the viscosity of polymerized epoxy resin under shock compression

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The VISAR laser interferometry method was used to study the viscous properties of polymerized epoxy resin under shock compression in the pressure range 0.8—2.7 GPa. The Hugoniot is obtained in the coordinates mass velocity—the velocity of the shock wave, which is consistent with the data available in the literature. The dependence of the maximum longitudinal strain rate on the pressure behind the shock wave front in the form of a power function is obtained. The value of the exponent 5.5 was significantly higher than the exponent 4, which is typical for most of these materials. The question of achieving a stationary propagation mode by shock waves in the performed experiments is considered. The viscosity coefficient of the polymerized epoxy resin is calculated, the values of which are in the range from 0.1 to 7.3 Pa \* s for the obtained shock compression pressures.