

# Shockwave initiation of liquid explosives based on tetranitromethane

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Studies of the effect of methanol concentration on the initiation and development of detonation in a tetranitromethane-methanol mixture under shockwave action have been carried out. Particle velocity profiles and the glow of the detonation front were recorded using the VISAR laser interferometer and high-speed camera. The dependence of the shockwave sensitivity of the mixture on the methanol concentration is determined. It was found that thermal explosion occurs almost simultaneously at many points of the shock-compressed explosive. The number of foci of the reaction decreases with an increase in the concentration of methanol. The dependence of the thermal explosion induction period on the methanol concentration is determined, and the obtained values are compared with the characteristic reaction time under steady-state detonation.

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