

# MATHEMATICAL MODEL FOR THERMOLYSIS OF NTO–TNT (1 : 1) MIXTURE

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**Abstract:** The mathematical model of thermal decomposition of NTO–TNT (1 : 1) mixture which rate is nonadditive concerning decay rates of components is presented. As the reason, a proved assumption about unstable complex formation of structure 1 : 1 at the stage of preliminary heating up of the mixture is put forward. The subsequent fast thermal decomposition of the complex gives necessary acceleration to mixture decomposition as a whole which proceeds with high speed till the end of experiment.

**Keywords:** thermal decomposition; complexation; autocatalysis; reaction products

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