

# Determination of the consistent pattern influence of prescription and internal ballistics parameters on the burning rate of the low-temperature high-burning gas-generating propellants

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*The paper describes the burning rate of low-temperature gas-generating propellants of a pyrotechnic type, which contains nitroguanidine, ammonium perchlorate and hexamine with additions of micro- and ultra-catalysts ammonium dichromate and iron oxide. The authors reveal how the temperature of burning propellants in the range of  $T_b = 1400...1800$  K influences their ballistic characteristics. The obtained approximate expressions help to design new recipes of propellants for different types of low-temperature gas-generators. If considering the found dependencies it become possible to develop the high-performance propellants for rotor accelerating devices in turbojet plants and systems of moving some elements of the actuators.*

**Keywords:** propellant, rate, burning, catalyst, dispersion.

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