

ENTHALPY OF FORMATION OF THE TRINITROMETHYL GROUP

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Abstract: The enthalpies of combustion and enthalpies of formation of three trinitromethyl derivatives of 1,3,5-triazine were determined by the calorimetric method. The data obtained can be used for calculating the energy capabilities of related compounds by the method of replacing functional groups. The thermochemical characteristics of trinitromethyl groups from 1,3,5-triazine derivatives are compared with the corresponding properties of these groups in azoles and nitroalkanes.

Keywords: explosives; thermochemical properties; 1,3,5-triazine; nitrocompounds; detonation

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Figure Captions

Figure 1 Trinitromethyl derivatives of 1,3,5-triazine

Figure 2 Dependence of the heat of explosion on the content of HMX in the mixture with compound VI

Figure 3 Dependence of the throwing ability of explosive compositions on HMX content: 1 — composition HMX — compound VI; and 2 — composition HMX — compound VI — aluminum

Table Captions

Table 1 Thermochemical properties of trinitromethyl derivatives of 1,3,5-triazine

Table 2 Explosive properties of some explosives

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