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## **NUMERICAL SIMULATION APPLIED FOR UNSYMMETRICAL DIMETHYLHYDRAZINE PROPELLANT GAS DISPERSION BASED ON CFD TECHNOLOGY**

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### **Abstract**

This paper presents a study of the numerical simulation applied for unsymmetrical dimethylhydrazine (UDMH) gas dispersion. This study considers an assumed UDMH store conditions and provides important data regarding the relation between the concentration distribution of UDMH and dispersion distance from the source based on the computation fluid dynamic (CFD) software FLUENT. The simulation results show that the ventilation vent and distance of dispersion play an important role in the concentration distribution of UDMH. These studies will be further helpful in developing an estimate of propellant storage safety and the emergency rescue after accidental leakage of propellant.

*Key words:* concentration, dispersion, numerical simulation, unsymmetrical dimethylhydrazine

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