

EXPLO5

THERMOCHEMICAL COMPUTER CODE

The EXPLO5™ is a multipurpose tool able to predict the energetic properties of single compounds or mixtures, the explosibility of possibly dangerous substances, the performance indicators of ideal and non-ideal explosives and propellants and the pyrotechnic compositions on a basis of chemical formula, heat of formation, and density. The code includes a large database of reactants and products.



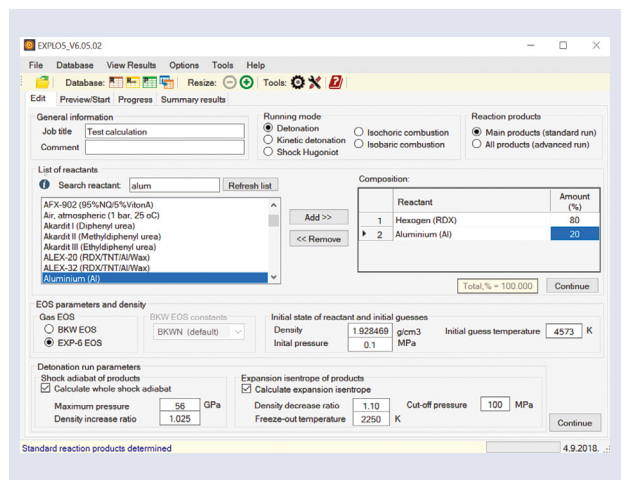
Current version: 6.05

EXPLO5 SOFTWARE IS DEVELOPED BY DR. MUHAMED SUĆESKA

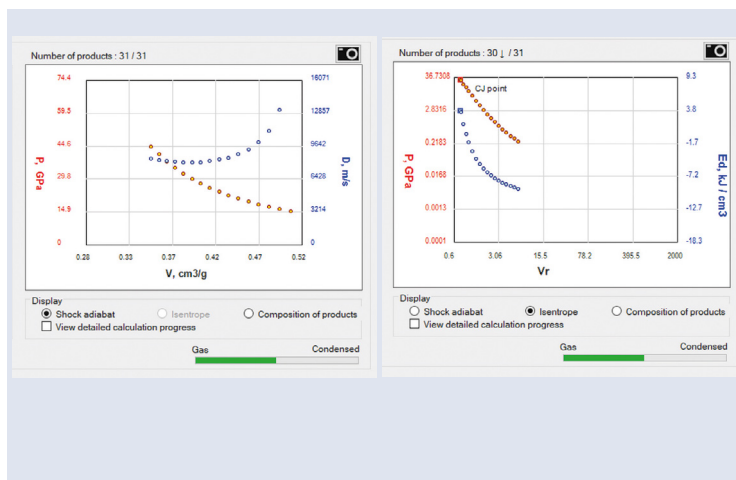
APPLICATIONS

The EXPLO5 may be used for a wide range of applications including safety management (within chemical/pharmaceutical labs), the numerical modelling of energetic materials, the formulation of new energetic compounds, and the optimization of industrial blasting operations.

Typical users of the code are synthetic chemists, risk assessment managers, blasting engineers, researchers and any other specialists in the fields of energetic materials.



Input window of EXPLO5



Calculated shock compression and isentropic expansion curves

ADVANTAGES & FEATURES

- ▶ The EXPLO5 calculates the thermodynamic parameters of all kinds of exothermic reactions
- ▶ Database contains over 550 reactants (explosives components) and 950 products
- ▶ The code handles 48 different chemical elements
- ▶ Becker-Kistiakowsky-Wilson (BKW), molecular fluid EXP-6, Ideal gas, Virial, and Murnaghan equations of state are employed for the description of detonation/burning products
- ▶ Kinetic detonation module is able to perform non-ideal detonation calculations



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