

FRAUNHOFER INSTITUTE FOR
CHEMICAL TECHNOLOGY ICT

ICT-THERMODYNAMIC- CODE (ICT-CODE)





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The ICT-Code is a powerful tool for the evaluation of the performance of rocket and gun propellants and the calculation of chemical equilibria. It is also used to optimize various combustion processes with regard to temperature, pressure and product formation.

The code is based on a method developed by the National Aeronautics and Space Administration (NASA). This method uses mass action and mass balance expressions to calculate chemical equilibria.



POSSIBILITIES

- Calculation of thermochemical and thermodynamic parameters of
 - combustion engines
 - chemical and petrochemical processes with regard to combustion
 - decomposition
 - pyrolysis
 - gasification
 - condensation
- Calculation of the heat of explosion
- Calculation of the specific impulse
- Determination of the parameters of gas detonations
- Calculation for constant pressure as well as for constant volume conditions
- Up to 75 reaction products; 40 of these can be in liquid or solid state
- Virial EOS can be used in addition to the ideal equation of state (EOS), especially for high-pressure conditions up to 700 MPa.
- Compatibility with the regularly updated **ICT-Database of Thermochemical Values**

SYSTEM REQUIREMENT

Windows 7 and higher

