

Define reactants and species to be considered

Reactants

Natural Gas + Air

Products

Soot formation

List of Species

CO2
CO
H2O
H2
O2

% Fuel

8.367

O/F

2.3

Phi

1

Species	N° moles	Mole fraction	Type	Temperature [K]
N2	8.6524	0.7239	Inert	300
O2	2.3000	0.1924	Oxidizer	300
CH4	0.8500	0.0711	Fuel	300
C2H6	0.1000	0.0084	Fuel	300
C3H8	0.0500	0.0042	Fuel	300

Select Problem Type

HP: Adiabatic T and composition at constant P

☐ Frozen chemistry

☐ Ionized species

Define state of reactants and products

Reactants

300

1

Temperature [K]

Pressure [bar]

Products

1

Additional constraints

Products

Constant Enthalpy: $hP = hR$

Calculate

Clear

Welcome to Combustion Toolbox v0.5 --- A MATLAB-GUI based open-source tool for solving combustion problems.