

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

Temperature [K]

1

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.

