

**ote** Please note that any parameter that is indicated as a trivial parameter can be obtained from the `Props1SI` function as shown above in [Trivial inputs](#)

Parameter	Units	Input/Output	Trivial	Description
<code>DELTA</code> , <code>Delta</code>		IO	False	Reduced density ( $\rho/\rho_c$ )
<code>DMOLAR</code> , <code>Dmolar</code>	mol/m <sup>3</sup>	IO	False	Molar density
<code>D</code> , <code>DMASS</code> , <code>Dmass</code>	kg/m <sup>3</sup>	IO	False	Mass density
<code>HMOLAR</code> , <code>Hmolar</code>	J/mol	IO	False	Molar specific enthalpy
<code>H</code> , <code>HMASS</code> , <code>Hmass</code>	J/kg	IO	False	Mass specific enthalpy
<code>P</code>	Pa	IO	False	Pressure
<code>Q</code>	mol/mol	IO	False	Mass vapor quality
<code>SMOLAR</code> , <code>Smolar</code>	J/mol/K	IO	False	Molar specific entropy
<code>S</code> , <code>SMASS</code> , <code>Smass</code>	J/kg/K	IO	False	Mass specific entropy
<code>TAU</code> , <code>Tau</code>		IO	False	Reciprocal reduced temperature ( $T_c/T$ )
<code>T</code>	K	IO	False	Temperature
<code>UMOLAR</code> , <code>Umolar</code>	J/mol	IO	False	Molar specific internal energy
<code>U</code> , <code>UMASS</code> , <code>Umass</code>	J/kg	IO	False	Mass specific internal energy
<code>ACENTRIC</code> , <code>acentric</code>		O	True	Acentric factor
<code>ALPHA0</code> , <code>alpha0</code>		O	False	Ideal Helmholtz energy
<code>ALPHAR</code> , <code>alphar</code>		O	False	Residual Helmholtz energy
<code>A</code> , <code>SPEED_OF_SOUND</code> , <code>speed_of_sound</code>	m/s	O	False	Speed of sound
<code>BVIRIAL</code> , <code>Bvirial</code>		O	False	Second virial coefficient
<code>CONDUCTIVITY</code> , <code>L</code> , <code>conductivity</code>	W/m/K	O	False	Thermal conductivity
<code>CPOMASS</code> , <code>Cp0mass</code>	J/kg/K	O	False	Ideal gas mass specific constant pressure specific heat

Parameter	Units	Input/Output	Trivial	Description
<code>CPOMOLAR</code> , <code>Cp0molar</code>	J/mol/K	O	False	Ideal gas molar specific constant pressure specific heat
<code>CPMOLAR</code> , <code>Cpmolar</code>	J/mol/K	O	False	Molar specific constant pressure specific heat
<code>CVIRIAL</code> , <code>Cvirial</code>		O	False	Third virial coefficient
<code>CVMASS</code> , <code>Cvmass</code> , 0	J/kg/K	O	False	Mass specific constant volume specific heat
<code>CVMOLAR</code> , <code>Cvmolar</code>	J/mol/K	O	False	Molar specific constant volume specific heat
<code>C</code> , <code>CPMASS</code> , <code>Cpmass</code>	J/kg/K	O	False	Mass specific constant pressure specific heat
<code>DALPHAO_DDELTA_CONSTTAU</code> , <code>dalphi0_ddelta_consttau</code>		O	False	Derivative of ideal Helmholtz energy with delta
<code>DALPHAO_DTAU_CONSTDELTA</code> , <code>dalphi0_dtau_constdelta</code>		O	False	Derivative of ideal Helmholtz energy with tau
<code>DALPHAR_DDELTA_CONSTTAU</code> , <code>dalphiar_ddelta_consttau</code>		O	False	Derivative of residual Helmholtz energy with delta
<code>DALPHAR_DTAU_CONSTDELTA</code> , <code>dalphiar_dtau_constdelta</code>		O	False	Derivative of residual Helmholtz energy with tau
<code>DBVIRIAL_DT</code> , <code>dBvirial_dT</code>		O	False	Derivative of second virial coefficient with respect to T
<code>DCVIRIAL_DT</code> , <code>dCvirial_dT</code>		O	False	Derivative of third virial coefficient with respect to T
<code>DIPOLE_MOMENT</code> , <code>dipole_moment</code>	C m	O	True	Dipole moment
<code>FH</code>		O	True	Flammability hazard
<code>FRACTION_MAX</code> , <code>fraction_max</code>		O	True	Fraction (mole, mass, volume) maximum value for incompressible solutions
<code>FRACTION_MIN</code> , <code>fraction_min</code>		O	True	Fraction (mole, mass, volume) minimum value for incompressible solutions

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FUNDAMENTAL_DERIVATIVE_OF_GAS_DYNAMICS , fundamental_derivative_of_gas_dynamics		O	False	Fundamental derivative of gas dynamics
GAS_CONSTANT , gas_constant	J/mol/K	O	True	Molar gas constant
GMOLAR_RESIDUAL , Gmolar_residual	J/mol/K	O	False	Residual molar Gibbs energy
GMOLAR , Gmolar	J/mol	O	False	Molar specific Gibbs energy
GWP100		O	True	100-year global warming potential
GWP20		O	True	20-year global warming potential
GWP500		O	True	500-year global warming potential
G , GMASS , Gmass	J/kg	O	False	Mass specific Gibbs energy
HELMHOLTZMASS , Helmholtzmass	J/kg	O	False	Mass specific Helmholtz energy
HELMHOLTZMOLAR , Helmholtzmolar	J/mol	O	False	Molar specific Helmholtz energy
HH		O	True	Health hazard
HMOLAR_RESIDUAL , Hmolar_residual	J/mol/K	O	False	Residual molar enthalpy
ISENTROPIC_EXPANSION_COEFFICIENT , isentropic_expansion_coefficient		O	False	Isentropic expansion coefficient
ISOBARIC_EXPANSION_COEFFICIENT , isobaric_expansion_coefficient	1/K	O	False	Isobaric expansion coefficient
ISOTHERMAL_COMPRESSIBILITY , isothermal_compressibility	1/Pa	O	False	Isothermal compressibility
I , SURFACE_TENSION , surface_tension	N/m	O	False	Surface tension
M , MOLARMASS , MOLAR_MASS , MOLEMASS , molar_mass , molarmass , molemass	kg/mol	O	True	Molar mass
ODP		O	True	Ozone depletion potential
PCRIT , P_CRITICAL , Pcrit , p_critical , pcrit	Pa	O	True	Pressure at the critical point
PHASE , Phase		O	False	Phase index as a float
PH		O	True	Physical hazard
PIP		O	False	Phase identification parameter
PMAX , P_MAX , P_max , pmax	Pa	O	True	Maximum pressure limit
PMIN , P_MIN , P_min , pmin	Pa	O	True	Minimum pressure limit

Parameter	Units	Input/Output	Trivial	Description
PRANDTL , Prandtl		O	False	Prandtl number
PTRIPLE , P_TRIPLE , p_triple , ptriple	Pa	O	True	Pressure at the triple point (pure only)
P_REDUCING , p_reducing	Pa	O	True	Pressure at the reducing point
RHOCRIT , RHOMASS_CRITICAL , rhocrit , rhomass_critical	kg/m <sup>3</sup>	O	True	Mass density at critical point
RHOMASS_REDUCING , rhomass_reducing	kg/m <sup>3</sup>	O	True	Mass density at reducing point
RHOMOLAR_CRITICAL , rhomolar_critical	mol/m <sup>3</sup>	O	True	Molar density at critical point
RHOMOLAR_REDUCING , rhomolar_reducing	mol/m <sup>3</sup>	O	True	Molar density at reducing point
SMOLAR_RESIDUAL , Smolar_residual	J/mol/K	O	False	Residual molar entropy (sr/R = s(T,rho) - s <sup>0</sup> (T,rho))
TCRIT , T_CRITICAL , T_critical , Tcrit	K	O	True	Temperature at the critical point
TMAX , T_MAX , T_max , Tmax	K	O	True	Maximum temperature limit
TMIN , T_MIN , T_min , Tmin	K	O	True	Minimum temperature limit
TTRIPLE , T_TRIPLE , T_triple , Ttriple	K	O	True	Temperature at the triple point
T_FREEZE , T_freeze	K	O	True	Freezing temperature for incompressible solutions
T_REDUCING , T_reducing	K	O	True	Temperature at the reducing point
V , VISCOSITY , viscosity	Pa s	O	False	Viscosity
Z		O	False	Compressibility factor