Property List

Steam95 Excel Add-In v3.1

	Property Name	Property ID	SI Units	English Units
1.	Pressure	p	bar	psi
2.	Temperature	t	°C	°F
3.	Density	d	kg/m³	lb/ft³
4.	Specific Volume	v	m³/kg	ft³/lb
5.	Specific enthalpy	h	kJ/kg	Btu/lb
6.	Specific entropy	s	kJ/(kg·K)	Btu/(lb·°F)
7.	Specific internal energy	u	kJ/kg	Btu/lb
8.	Specific isobaric heat capacity	cp	kJ/(kg·K)	Btu/(lb·°F)
9.	Specific isochoric heat capacity	cv	kJ/(kg·K)	Btu/(lb·°F)
10.	Speed of sound	w	m/s	ft/s
11.	Isentropic exponent	kapa	-	-
12.	Specific Helmholtz free energy	H	kJ/kg	Btu/lb
13.	Specific Gibbs free energy	G	kJ/kg	Btu/lb
14.	Compressibility factor	Z	-	-
15.	Steam quality	x	%	%
16.	Isobaric volume expansion coefficient	alpha	1/K	1/°F
17.	Isothermal compressibility	Kt	1/MPa	1/psi
18.	Partial derivative (dV/dT)p	dvdt	m³/(kg·K)	ft³/(lb·°F)
19.	Partial derivative (dV/dP)T	dvdp	m³/(kg·MPa)	ft³/(lb·psi)
20.	Partial derivative (dP/dT)v	dpdt	MPa/K	psi/°F
21.	Partial derivative (dP/dV)T	dpdv	MPa·kg/m³	psi·lb/ft³
22.	Isothermal Joule-Thomson coefficient	iJTC	kJ/(kg·MPa)	Btu/(lb·psi)
23.	Joule-Thomson coefficient	JTC	K/MPa	°F/psi
24.	Dynamic viscosity	dv	μPa·s	lb/(ft·h)
25.	Kinematic viscosity	kv	mm²/s	ft²/h
26.	Thermal conductivity	tc	W/(K·m)	Btu/(h·ft·°F)
27.	Thermal diffusivity	td	mm²/s	ft²/h
28.	Prandtl number	Pr	-	-
29.	Surface tension	Sigma	mN/m	lbf/ft
30.	Static dielectric constant	dc	-	-

Property List

Steam97 Excel Add-In v3.1

	Property Name	Property ID	SI Units	English Units
1.	Pressure	p	bar	Psi
2.	Temperature	t	°C	°F
3.	Density	d	kg/m³	lb/ft³
4.	Specific Volume	v	m³/kg	ft³/lb
5.	Specific enthalpy	h	kJ/kg	Btu/lb
6.	Specific entropy	s	kJ/(kg·K)	Btu/(lb·°F)
7.	Specific internal energy	u	kJ/kg	Btu/lb
8.	Specific isobaric heat capacity	cp	kJ/(kg·K)	Btu/(lb·°F)
9.	Specific isochoric heat capacity	cv	kJ/(kg·K)	Btu/(lb·°F)
10.	Speed of sound	w	m/s	ft/s
11.	Isentropic exponent	kapa	-	-
12.	Specific Helmholtz free energy	H	kJ/kg	Btu/lb
13.	Specific Gibbs free energy	G	kJ/kg	Btu/lb
14.	Compressibility factor	Z	-	-
15.	Steam quality	x	%	%
16.	Region	region	-	-
17.	Isobaric volume expansion coefficient	alpha	1/K	1/°F
18.	Isothermal compressibility	Kt	1/MPa	1/psi
19.	Partial derivative (dV/dT)p	dvdt	m³/(kg·K)	ft³/(lb·°F)
20.	Partial derivative (dV/dP)T	dvdp	m³/(kg·MPa)	ft³/(lb·psi)
21.	Partial derivative (dP/dT)v	dpdt	MPa/K	psi/°F
22.	Partial derivative (dP/dV)T	dpdv	MPa·kg/m³	psi·lb/ft³
23.	Isothermal Joule-Thomson coefficient	iJTC	kJ/(kg·MPa)	Btu/(lb·psi)
24.	Joule-Thomson coefficient	JTC	K/MPa	°F/psi
25.	Dynamic viscosity	dv	μPa·s	lb/(ft·h)
26.	Kinematic viscosity	kv	mm²/s	ft²/h
27.	Thermal conductivity	tc	W/(K·m)	Btu/(h·ft·°F)
28.	Thermal diffusivity	td	mm²/s	ft²/h
29.	Prandtl number	Pr	-	-
30.	Surface tension	Sigma	mN/m	lbf/ft

Constant Properties

Steam95 Excel Add-In v3.1 and Steam97 Excel Add-In v3.1

	Property Name	Constant ID	SI Units	English Units
1.	Specific gas constant	R	kJ/(kg·K)	Btu/(lb·°F)
2.	Molar gas constant	Rm	J/(mol·K)	Btu/(lbmol·°F)
3.	Molar mass	Mw	g/mol	lbm/lbmol
4.	Critical temperature	Tcr	°C	°F
5.	Critical pressure	Pcr	bar	Psi
6.	Critical density	Dcr	kg/m³	lb/ft³
7.	Triple point temperature	Tt	°C	°F
8.	Triple-point pressure	Pt	bar	psi