



ASIMPTOTE FluidProp: Pure Fluids

Available Fluids

Thermodynamic Models:

GasMix	G	Fluids in black come with the free version of FluidProp
IF97	I	Fluids in grey come with the specified thermodynamic library (not free)
RefProp 9.1	R	Fluids in orange are delivered as special sets (not free)
FreeStanMix	F	
StanMix	S	
TPSI	T	For RefProp 9.1, see NIST site for functionality
PCP-SAFT	P	

	G	I	R	F	S	T	P
Linear alkanes							
methane	G		R	F	S	T	P
ethane	G		R	F	S	T	P
propane	G		R	F	S	T	P
butane	G		R	F	S	T	P
pentane	G		R	F	S	T	P
hexane	G		R	F	S	T	P
heptane	G		R	F	S	T	P
octane	G		R	F	S	T	P
nonane		R					
decane		R					
dodecane		R		S			
isobutane		R	F	S	T		
isopentane		R	F	S	T		
isohexane		R					
neopentane		R					
Cyclic alkanes							
cyclopropane		R					
cyclopentane		R					
cyclohexane		R	F	S			
methylcyclohexane		R					
propylcyclohexane		R					
Aromatics							
benzene		R	F	S		P	
toluene		R	F	S		P	
ethylbenzene		R	F	S			
p-xylene		R	F	S			
biphenyl				S			
trimethylbenzene				S			
naphthalene				S			
Alcohols							
methanol	G		R	F	S		P
ethanol	G		R	F	S		P
1-propanol				S			
2-propanol				S			
1-butanol				S			
2-butanol				S			
1-octanol				S			
Noble gases							
helium	G	R					
neon	G	R					
argon	G	R	F	S		P	
krypton		R					
xenon		R					
Halogenes							
fluorine	G	R					
chlorine	G						
bromine	G						
Ketones							
acetone		R	F	S		P	
Alkynes							
acetylene	G						
propyne		R					
Alkenes							
ethylene	G	R					
propylene		R					
butene		R					
cis-butene		R					
isobutene		R					
trans-butene		R					
Ethers							
dimethyl ether	G	R	F	S		P	
Esters							
dimethyl carbonate		R					

	G	I	R	F	S	T	P
Inorganics							
ammonia	G		R	F	S	T	
carbon dioxide	G		R	F	S		P
carbon monoxide	G		R				P
carbon disulfide	G						
carbon tetrachloride	G						
carbonyl sulfide	G		R				
nitrogen	G		R	F	S		P
nitrogen dioxide	G						
nitrogen trifluoride			R				
nitrous oxide (N ₂ O)	G		R				
nitric oxide (NO)	G						
nitrosyl chloride (NOCl)	G						
oxygen	G		R	F	S		P
sulfur dioxide	G		R				
sulfur trioxide	G						
sulfur hexafluoride	G		R				
hydrogen							
orthohydrogen	G		R	F	S		P
parahydrogen			R				
hydrogen cyanide	G						
hydrogen peroxide	G						
hydrogen sulfide	G		R				P
deuterium			R				
water							
heavy water	G	I	R	F	S	T	P
hydrofluoric acid	G						
hydrochloric acid	G						
trichloro borane	G						
trifluoro borane	G						
silane	G						
silicon tetrafluoride	G						
Linear siloxanes							
MM			R	F	S		P
MDM			R	F	S		P
MD2M			R	F	S		P
MD3M			R	F	S		P
MD4M			R	F	S		P
MD5M				F	S		P
MD6M				F	S		P
Cyclic siloxanes							
D3				F	S		P
D4			R	F	S		P
D5			R	F	S		P
D6			R	F	S		P
Liquid metals							
cesium ¹⁾						T	
potassium ²⁾						T	
rubidium ³⁾						T	
sodium ⁴⁾						T	
Hydrofluoroolefins							
HCFO-1233zd-E (C3ClF3H2)		R	F	S		P	
HFO-1234yf (C3F4H2)		R	F	S		P	
HFO-1234ze-E (C3F4H2)		R	F	S		P	
HFO-1243zf (C3F3H3)			F	S		P	
HFO-1336mzz-Z (C4F6H2)			F	S		P	

	G	I	R	F	S	T	P
Perfluorocarbons							
R14 (CF4)					R	F	S
R116 (C2F6)					R	F	S
R218 (C3F8)					R		
RC318 (c-C4F8)					R		
perfluoro butane (C4F10)					R		
perfluoro pentane (C5F12)					R		
perfluoro cyclohexane (C6F12)					R	S	P
hexafluoro benzene (C6F6)						S	P
PP2 (C7F14)						S	P
PP5 (C10F18)						S	
PP9 (C11F20)							
PP10 (C13F22)							
PP11 (C14F24)							
PP24 (C16F26)							
PP25 (C17F30)							
FC-72 (C6F14)							
Hydrofluorocarbons							
fluoroethane (C2H5F)			R				
R23 (CHF3)			R	F	S		
R32 (CH2F2)			R	F	S		
R41 (CH3F)			R				
R125 (CHF2CF3)			R	F	S		
R134a (CH2FCF3)			R	F	S		
R143a (CH3CF3)			R				
R152a (CH3CHF2)			R				
R227ea (CF3CHFCCF3)			R				
R236ea			R				
R236fa (CF3CH2CF3)			R				
R245ca			R				
R245fa (CHF2CH2CF3)			R	F	S		
R365mfc (CH3CF2CH2CF3)			R				
CFC's							
R11 (CCl3F)			R			T	
R12 (CCl2F2)			R	F	S	T	
R13 (CClF3)			R			T	
R113 (C2Cl3F3)			R	F	S		
R114 (C2Cl2F4)			R		S		
R115 (C2ClF5)			R				
HCFC's							
R21 (CHCl2F)			R				
R22 (CHClF2)			R	F	S		
R123 (CHCl2CF3)			R				
R124 (CHClFCF3)			R				
R141b (C2H3Cl2F)			R				
R142b (C2H3ClF2)			R	F	S		
Fluorinated ethers							
E-3 (C11F23HO3)							
E-4 (C14F29HO4)							
E-5 (C17F35HO5)							
Perfluoro amines							
FC-43 (C12F27N)							
FC-70 (C15F33N)							
FC-71 (C18F39N)							
Other							
FC-75 (C8F16O)							
methyl stearate (C19H38O2)			R				
methyl oleate (C19H36O2)			R				
methyl linoleate (C19H34O2)			R				
methyl linolenate (C19H32O2)			R				
methyl palmitate (C17H34O2)			R				
trifluoriodomethane (ClF3I)			R				

1) valid for 800 < T < 1600, P < 3 MPa, saturated liquid, vapor-liquid and vapor properties
 2) valid for 800 < T < 1700, P < 3 MPa, saturated liquid, vapor-liquid and vapor properties
 3) valid for 1000 < T < 1600, P < 4 MPa, saturated liquid, vapor-liquid and vapor properties
 4) valid for 800 < T < 1650, P < 2 MPa, saturated liquid, vapor-liquid and vapor properties



ASIMPTOTE FluidProp: Mixtures

Available Fluids

Thermodynamic Models:

GasMix	G	Fluids in black come with the free version of FluidProp
IF97	I	Fluids in grey come with the specified thermodynamic library (not free)
RefProp 9.1	R	Fluids in orange are delivered as special sets (not free)
(Free)StanMix	S	
TPSI	T	For RefProp 9.1, see NIST site for functionality
PCP-SAFT	P	

Air

	G	I	R	F	S	T	P
air			R	F	S	T	
moist. air						T	

Siloxane mixtures

MM/MDM				F	S		
MM/MD2M				F	S		
MM/MD3M				F	S		
MM/MD4M				F	S		
MM/MD5M				F	S		
MM/MD6M				F	S		
MDM/MD2M				F	S		
MDM/MD3M				F	S		
MDM/MD4M				F	S		
MDM/MD5M				F	S		
MDM/MD6M				F	S		
MD2M/MD3M				F	S		
MD2M/MD4M				F	S		
MD2M/MD5M				F	S		
MD2M/MD6M				F	S		
MD3M/MD4M				F	S		
MD3M/MD5M				F	S		
MD3M/MD6M				F	S		
MD4M/MD5M				F	S		
MD4M/MD6M				F	S		
MD5M/MD6M				F	S		
MM/D3				F	S		
MM/MDM/MD2M				F	S		
MM/MDM/MD3M				F	S		
MM/MDM/MD4M				F	S		
MM/MDM/MD2M/MD3M				F	S		
MM/MDM/MD2M/MD3M/MD4M/MD5M/MD6M				F	S		
D3/D4/D5/D6				F	S		
D4/D3				F	S		
D4/D5				F	S		
D4/D6				F	S		
D5/D3				F	S		
D5/D6				F	S		
D6/D3				F	S		
silox 1				F	S		
silox 2				F	S		
silox 3				F	S		

Siloxane/perfluorocarbon mixtures

MM/PP2				F	S		
MDM/PP2				F	S		
MD2M/PP2				F	S		
MD3M/PP2				F	S		
MD4M/PP2				F	S		
MM/CP28				F	S		
D4/CP28				F	S		
D4/PFCH				F	S		

Refrigerant mixtures

R113/ethanol				F	S		
R114/ethanol				F	S		
R134a/R116			R	F	S		
R134a/R142b			R	F	S		
R14/R23			R	F	S		
R401A			R				
R401B			R				
R401C			R				
R402A			R				
R402B			R				
R403A			R				
R403B			R				
R404A			R				
R405A			R				
R406A			R				
R407A			R	F	S		
R407B			R				
R407C			R				
R407D			R				
R407E			R				
R408A			R				
R409A			R				
R409B			R				
R410A			R	F	S		
R410B			R	F	S		
R411A			R				
R411B			R				
R412A			R				
R413A			R				
R414A			R				
R414B			R				
R415A			R				
R415B			R				
R416A			R				
R417A			R				
R418A			R				
R419A			R				
R420A			R				
R421A			R				
R421B			R				
R422A			R				
R422B			R				
R422C			R				
R422D			R				
R423A			R				
R424A			R				
R425A			R				
R426A			R				
R427A			R				
R428A			R				
R429A			R				
R430A			R				
R431A			R				
R432A			R				
R433A			R				
R434A			R				
R435A			R				
R436A			R				
R436B			R				
R437A			R				
R438A			R				
R500			R				
R501			R				
R502			R				
R503			R				
R504			R				
R507A			R				
R508A			R				
R508B			R				
R509A			R				
R510A			R				

Hydrocarbon mixtures

benzene/cyclohexane				F	S		
benzene/cyclohexane/hexane				F	S		
benzene/ethylbenzene				F	S		
benzene/hexane				F	S		
benzene/toluene				F	S		
butane/hexane				F	S		
butane/pentane				F	S		
ethylbenzene/toluene				F	S		
hexane/cyclohexane				F	S		
isobutane/isopentane				F	S		
pentane/hexane				F	S		
propane/pentane				F	S		

CO2-mixtures

carbon dioxide/benzene				F	S		
carbon dioxide/butane				F	S		
carbon dioxide/hexane				F	S		
carbon dioxide/pentane				F	S		
carbon dioxide/propane				F	S		
carbon dioxide/toluene				F	S		

Alcohol/water mixtures

methanol/water				F	S		
ethanol/water						S	

Natural gas mixtures

Amarillo Gas						R	
Gulf Coast Gas						R	
Ekofisk Gas						R	
High CO2 and Nitrogen Gas						R	
High Nitrogen Gas						R	

Other mixtures

methanol/benzene							S
nitrogen/oxygen				F	S		

