

Norflurane

Other names:	1,1,1,2-Tetrafluoroethane 1,2,2,2-Tetrafluoroethane CF3CH2F Ethane, 1,1,1,2-tetrafluoro- Freon 134a HFA-134a NORFLURAN R 134a R-134a REFRIGERANT-134A
Inchi:	InChI=1S/C2H2F4/c3-1-2(4,5)6/h1H2
InchiKey:	LVGUZGTVOIAKKC-UHFFFAOYSA-N
Formula:	C2H2F4
SMILES:	FCC(F)(F)F
Mol. weight [g/mol]:	102.03
CAS:	811-97-2

Physical Properties

Property code	Value	Unit	Source
gf	-810.44	kJ/mol	Joback Method
hf	-877.80	kJ/mol	Joback Method
hfus	5.84	kJ/mol	Joback Method
hvap	15.48	kJ/mol	Joback Method
log10ws	-1.18		Crippen Method
logp	1.518		Crippen Method
mcvol	46.120	ml/mol	McGowan Method
pc	4051.00	kPa	Critical Parameters and Vapor Pressures Measurements of Hydrofluoroethers at High Temperatures

pc	4053.00	kPa	Critical Properties of Four HFE + HFC Binary Systems: Trifluoromethoxymethane (HFE-143m) + Pentafluoroethane (HFC-125), + 1,1,1,2-Tetrafluoroethane (HFC-134a), + 1,1,1,2,3,3,3-Heptafluoropropane (HFC-227ea), and + 1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)
pc	4048.10 ± 5.00	kPa	NIST Webbook
pc	4048.20 ± 3.00	kPa	NIST Webbook
pc	4065.00	kPa	KDB
pc	4054.00 ± 8.00	kPa	NIST Webbook
pc	4052.00 ± 9.00	kPa	NIST Webbook
pc	4055.10 ± 2.00	kPa	NIST Webbook
pc	4068.00 ± 10.00	kPa	NIST Webbook
pc	4055.00 ± 6.00	kPa	NIST Webbook
pc	4053.00	kPa	Critical Parameters Measurements of Four HFE + HFC Binary Systems: Pentafluoromethoxyethane (HFE-245Mc) + Pentafluoroethane (HFC-125), + 1,1,1,2-Tetrafluoroethane (HFC-134a), + 1,1,1,2,3,3,3-Heptafluoropropane (HFC-227ea), and + 1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)
pc	4064.00 ± 10.00	kPa	NIST Webbook
pc	4067.00 ± 2.70	kPa	NIST Webbook
pc	4065.00 ± 8.00	kPa	NIST Webbook
pc	4067.00 ± 10.00	kPa	NIST Webbook
pc	4047.80 ± 5.00	kPa	NIST Webbook
pc	4029.00 ± 6.00	kPa	NIST Webbook
rhoc	512.20 ± 5.10	kg/m3	NIST Webbook
rhoc	508.11 ± 3.06	kg/m3	NIST Webbook
rhoc	515.15 ± 2.55	kg/m3	NIST Webbook
rhoc	511.17 ± 3.06	kg/m3	NIST Webbook
rhoc	508.11 ± 5.10	kg/m3	NIST Webbook
rhoc	509.13 ± 2.04	kg/m3	NIST Webbook
rhoc	511.17 ± 5.10	kg/m3	NIST Webbook
rhoc	512.20 ± 2.04	kg/m3	NIST Webbook
rhoc	509.13 ± 3.06	kg/m3	NIST Webbook
rhoc	507.09 ± 5.10	kg/m3	NIST Webbook
rhoc	507.09 ± 5.10	kg/m3	NIST Webbook
rinpol	219.00		NIST Webbook

rinpol	219.00		NIST Webbook
rinpol	219.00		NIST Webbook
tb	246.60	K	KDB
tb	247.10 ± 2.00	K	NIST Webbook
tb	246.60	K	NIST Webbook
tc	374.30	K	KDB
tc	374.18 ± 0.10	K	NIST Webbook
tc	374.27 ± 0.10	K	NIST Webbook
tc	374.25 ± 0.15	K	NIST Webbook
tc	373.05 ± 0.30	K	NIST Webbook
tc	374.11 ± 0.05	K	NIST Webbook
tc	374.25 ± 0.05	K	NIST Webbook
tc	374.11 ± 0.03	K	NIST Webbook
tc	373.80 ± 0.50	K	NIST Webbook
tc	374.08 ± 0.02	K	NIST Webbook
tc	374.07 ± 0.02	K	NIST Webbook
tc	374.07 ± 0.02	K	NIST Webbook
tc	374.07 ± 0.04	K	NIST Webbook
tc	374.20 ± 0.10	K	NIST Webbook
tc	374.30 ± 0.01	K	NIST Webbook
tf	172.00	K	KDB
tt	169.85 ± 0.01	K	NIST Webbook
tt	169.85 ± 0.01	K	NIST Webbook
tt	169.85 ± 0.02	K	NIST Webbook
vc	0.198	m3/kmol	KDB
zc	0.2586240		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	97.89	J/mol×K	369.61	Joback Method
cpg	71.67	J/mol×K	239.01	Joback Method
cpg	76.59	J/mol×K	260.78	Joback Method
cpg	81.27	J/mol×K	282.54	Joback Method
cpg	85.74	J/mol×K	304.31	Joback Method
cpg	89.99	J/mol×K	326.08	Joback Method
cpg	94.04	J/mol×K	347.85	Joback Method
hfust	2.01	kJ/mol	169.40	NIST Webbook
hvapt	22.00	kJ/mol	321.00	NIST Webbook
hvapt	23.70	kJ/mol	233.50	NIST Webbook
hvapt	26.40	kJ/mol	180.00	NIST Webbook

hvapt	25.00	kJ/mol	200.00	NIST Webbook
hvapt	23.80	kJ/mol	220.00	NIST Webbook
hvapt	22.70	kJ/mol	240.00	NIST Webbook
kvisc	0.0000001	m2/s	312.86	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering
kvisc	7.9000000e-08	m2/s	368.26	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering
kvisc	8.5600000e-08	m2/s	363.27	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering
kvisc	9.7900000e-08	m2/s	352.89	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering
kvisc	0.0000002	m2/s	302.99	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering
kvisc	0.0000001	m2/s	332.92	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering

kvisc	0.0000001	m2/s	322.92	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering
kvisc	0.0000001	m2/s	342.90	Liquid Viscosity and Surface Tension of R1234yf and R1234ze Under Saturation Conditions by Surface Light Scattering
pvap	967.30	kPa	311.35	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	575.10	kPa	293.31	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	610.80	kPa	295.30	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	649.30	kPa	297.32	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	685.50	kPa	299.21	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	688.70	kPa	299.31	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	689.40	kPa	299.34	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	726.70	kPa	301.19	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	730.00	kPa	301.30	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	767.00	kPa	303.06	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	769.80	kPa	303.19	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	773.50	kPa	303.31	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	819.10	kPa	305.33	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	866.60	kPa	307.34	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	916.00	kPa	309.35	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	539.90	kPa	291.29	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	1019.30	kPa	313.31	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	1076.90	kPa	315.36	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	1133.00	kPa	317.32	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	1195.50	kPa	319.38	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	1256.10	kPa	321.34	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	1532.30	kPa	329.37	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	1767.40	kPa	335.39	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	1851.90	kPa	337.41	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	1939.20	kPa	339.41	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	2029.50	kPa	341.43	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	2123.00	kPa	343.43	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	2319.80	kPa	347.44	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	2419.40	kPa	349.46	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	2530.30	kPa	351.46	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	2641.10	kPa	353.48	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	2755.40	kPa	355.48	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	3054.30	kPa	360.48	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	294.20	kPa	273.15	Measurement of vapor liquid equilibria for the binary systems of propane + 1,1,1,2-tetrafluoroethane and 1,1,1-trifluoroethane + propane at various temperatures
pvap	416.90	kPa	283.15	Measurement of vapor liquid equilibria for the binary systems of propane + 1,1,1,2-tetrafluoroethane and 1,1,1-trifluoroethane + propane at various temperatures

pvap	571.90	kPa	293.15	Measurement of vapor liquid equilibria for the binary systems of propane + 1,1,1,2-tetrafluoroethane and 1,1,1-trifluoroethane + propane at various temperatures
pvap	770.40	kPa	303.15	Measurement of vapor liquid equilibria for the binary systems of propane + 1,1,1,2-tetrafluoroethane and 1,1,1-trifluoroethane + propane at various temperatures
pvap	1012.80	kPa	313.15	Measurement of vapor liquid equilibria for the binary systems of propane + 1,1,1,2-tetrafluoroethane and 1,1,1-trifluoroethane + propane at various temperatures
pvap	1313.80	kPa	323.15	Measurement of vapor liquid equilibria for the binary systems of propane + 1,1,1,2-tetrafluoroethane and 1,1,1-trifluoroethane + propane at various temperatures
pvap	202.60	kPa	263.15	Experimental vapor pressure data and a vapor pressure equation for fluoroethane (HFC-161)
pvap	245.50	kPa	268.15	Experimental vapor pressure data and a vapor pressure equation for fluoroethane (HFC-161)

pvap	294.12	kPa	273.15	Experimental vapor pressure data and a vapor pressure equation for fluoroethane (HFC-161)	
pvap	416.60	kPa	283.15	Experimental vapor pressure data and a vapor pressure equation for fluoroethane (HFC-161)	
pvap	163.90	kPa	258.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K	
pvap	200.60	kPa	263.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K	
pvap	243.30	kPa	268.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K	
pvap	314.60	kPa	275.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K	
pvap	414.60	kPa	283.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K	

pvap	571.70	kPa	293.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K
pvap	770.20	kPa	303.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K
pvap	1017.00	kPa	313.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K
pvap	1318.00	kPa	323.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K
pvap	1682.00	kPa	333.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K
pvap	2117.00	kPa	343.15	Vapor-liquid equilibrium of difluoromethane +1,1,1,2-tetrafluoroethane systems over a temperature range from 258.15 to 343.15K

pvap	133.50	kPa	253.15	Isothermal vapour + liquid equilibrium measurements and correlation for the pentafluoroethane + cyclopropane and the cyclopropane + 1,1,1,2-tetrafluoroethane binary systems
pvap	291.80	kPa	273.15	Isothermal vapour + liquid equilibrium measurements and correlation for the pentafluoroethane + cyclopropane and the cyclopropane + 1,1,1,2-tetrafluoroethane binary systems
pvap	572.10	kPa	293.15	Isothermal vapour + liquid equilibrium measurements and correlation for the pentafluoroethane + cyclopropane and the cyclopropane + 1,1,1,2-tetrafluoroethane binary systems
pvap	195.70	kPa	263.43	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa
pvap	287.10	kPa	273.32	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa

pvap	407.20	kPa	283.22	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa
pvap	483.60	kPa	288.30	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa
pvap	566.30	kPa	293.29	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa
pvap	1014.70	kPa	313.31	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa
pvap	1680.40	kPa	333.32	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa
pvap	2636.00	kPa	353.20	Vapor liquid equilibrium data for the (hexafluoroethane +1,1,1,2-tetrafluoroethane) system at temperatures from 263 to 353K and pressures up to 4.16MPa

pvap	416.00	kPa	283.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters
pvap	572.40	kPa	293.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters
pvap	771.50	kPa	303.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters
pvap	1017.50	kPa	313.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters
pvap	1318.80	kPa	323.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters

pvap	1681.60	kPa	333.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters
pvap	2114.50	kPa	343.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters
pvap	2629.00	kPa	353.15	Vapour liquid equilibria of the system 1,1,1,2-tetrafluoroethane + monoethylene-glycol dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters
pvap	414.00	kPa	283.15	Vapor-liquid equilibria for the 1,1,1,2-tetrafluoroethane (HFC-134a) + 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea) and 1,1,1-trifluoroethane (HFC-143a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) systems
pvap	571.50	kPa	293.15	Vapor-liquid equilibria for the 1,1,1,2-tetrafluoroethane (HFC-134a) + 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea) and 1,1,1-trifluoroethane (HFC-143a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) systems

pvap	767.00	kPa	303.15	Vapor-liquid equilibria for the 1,1,1,2-tetrafluoroethane (HFC-134a) + 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea) and 1,1,1-trifluoroethane (HFC-143a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) systems
pvap	1013.00	kPa	313.15	Vapor-liquid equilibria for the 1,1,1,2-tetrafluoroethane (HFC-134a) + 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea) and 1,1,1-trifluoroethane (HFC-143a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) systems
pvap	1314.70	kPa	323.15	Vapor-liquid equilibria for the 1,1,1,2-tetrafluoroethane (HFC-134a) + 1,1,1,2,3,3,3-heptafluoropropane (HFC-227ea) and 1,1,1-trifluoroethane (HFC-143a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) systems
pvap	415.50	kPa	283.15	Vapor-liquid equilibria measurements of 1,1,1,2-tetrafluoroethane (HFC-134a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) + isobutane (HC-600a) ternary system
pvap	572.40	kPa	293.15	Vapor-liquid equilibria measurements of 1,1,1,2-tetrafluoroethane (HFC-134a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) + isobutane (HC-600a) ternary system

pvap	768.90	kPa	303.15	Vapor-liquid equilibria measurements of 1,1,1,2-tetrafluoroethane (HFC-134a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) + isobutane (HC-600a) ternary system
pvap	1015.50	kPa	313.15	Vapor-liquid equilibria measurements of 1,1,1,2-tetrafluoroethane (HFC-134a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) + isobutane (HC-600a) ternary system
pvap	1317.20	kPa	323.15	Vapor-liquid equilibria measurements of 1,1,1,2-tetrafluoroethane (HFC-134a) + 2,3,3,3-tetrafluoroprop-1-ene (HFO-1234yf) + isobutane (HC-600a) ternary system
pvap	413.80	kPa	283.15	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	488.40	kPa	288.17	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	571.20	kPa	293.15	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	665.10	kPa	298.16	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))

pvap	769.80	kPa	303.16	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	885.90	kPa	308.15	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	1015.30	kPa	313.15	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	1158.40	kPa	318.14	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	1316.10	kPa	323.15	Isothermal vapor liquid equilibrium measurements for difluoromethane (R32) + trans-1,3,3,3-tetrafluoropropene (R1234ze(E))
pvap	294.30	kPa	273.17	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	351.20	kPa	278.17	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system

pvap	415.40	kPa	283.16	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	488.20	kPa	288.16	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	570.60	kPa	293.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	664.80	kPa	298.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	769.20	kPa	303.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system

pvap	886.00	kPa	308.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	1017.70	kPa	313.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	1158.10	kPa	318.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	1317.40	kPa	323.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	1489.60	kPa	328.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system

pvap	1679.70	kPa	333.15	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	1889.10	kPa	338.14	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	2118.10	kPa	343.14	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	2361.20	kPa	348.13	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system
pvap	2634.60	kPa	353.13	Experimental measurements of saturated vapor pressure and isothermal vapor-liquid equilibria for 1,1,1,2-Tetrafluoroethane (HFC-134a) + 3,3,3-trifluoropropene (HFO-1243zf) binary system

pvap	404.00	kPa	282.55	Bubble pressure measurements for the (1,1,1,2-tetrafluoroethane + triethylene glycol dimethyl ether) system
pvap	572.60	kPa	293.32	Bubble pressure measurements for the (1,1,1,2-tetrafluoroethane + triethylene glycol dimethyl ether) system
pvap	773.30	kPa	303.24	Bubble pressure measurements for the (1,1,1,2-tetrafluoroethane + triethylene glycol dimethyl ether) system
pvap	1002.20	kPa	312.66	Bubble pressure measurements for the (1,1,1,2-tetrafluoroethane + triethylene glycol dimethyl ether) system
pvap	1304.90	kPa	322.82	Bubble pressure measurements for the (1,1,1,2-tetrafluoroethane + triethylene glycol dimethyl ether) system
pvap	84.10	kPa	243.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	92.40	kPa	245.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows

pvap	101.40	kPa	247.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	111.10	kPa	249.15	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	121.40	kPa	251.16	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	132.50	kPa	253.15	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	144.30	kPa	255.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows

pvap	157.10	kPa	257.16	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	170.60	kPa	259.17	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	185.00	kPa	261.16	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	200.20	kPa	263.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	216.40	kPa	265.13	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows

pvap	233.70	kPa	267.13	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	252.10	kPa	269.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	271.60	kPa	271.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	292.10	kPa	273.13	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	313.90	kPa	275.13	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows

pvap	337.20	kPa	277.16	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	361.50	kPa	279.16	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	387.30	kPa	281.16	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	414.30	kPa	283.17	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	442.10	kPa	285.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows

pvap	472.30	kPa	287.15	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	503.40	kPa	289.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	536.30	kPa	291.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	570.90	kPa	293.14	Experimental measurement of vapor pressures and (vapor + liquid) equilibrium for {1,1,1,2-tetrafluoroethane (R134a) + propane (R290)} by a recirculation apparatus with view windows
pvap	127.20	kPa	252.12	PVTx properties in the gas phase for binary R290/R134a system
pvap	151.40	kPa	256.18	PVTx properties in the gas phase for binary R290/R134a system
pvap	178.50	kPa	260.19	PVTx properties in the gas phase for binary R290/R134a system

pvap	209.60	kPa	264.20	PVTx properties in the gas phase for binary R290/R134a system
pvap	244.30	kPa	268.21	PVTx properties in the gas phase for binary R290/R134a system
pvap	283.00	kPa	272.14	PVTx properties in the gas phase for binary R290/R134a system
pvap	326.10	kPa	276.09	PVTx properties in the gas phase for binary R290/R134a system
pvap	374.90	kPa	280.13	PVTx properties in the gas phase for binary R290/R134a system
pvap	428.70	kPa	284.10	PVTx properties in the gas phase for binary R290/R134a system
pvap	487.00	kPa	288.09	PVTx properties in the gas phase for binary R290/R134a system
pvap	554.10	kPa	292.13	PVTx properties in the gas phase for binary R290/R134a system
pvap	630.30	kPa	296.32	PVTx properties in the gas phase for binary R290/R134a system
pvap	707.10	kPa	300.17	PVTx properties in the gas phase for binary R290/R134a system
pvap	792.40	kPa	304.12	PVTx properties in the gas phase for binary R290/R134a system
pvap	887.00	kPa	308.12	PVTx properties in the gas phase for binary R290/R134a system

pvap	991.80	kPa	312.19	PVTx properties in the gas phase for binary R290/R134a system
pvap	1103.50	kPa	316.20	PVTx properties in the gas phase for binary R290/R134a system
pvap	1220.60	kPa	320.09	PVTx properties in the gas phase for binary R290/R134a system
pvap	84.50	kPa	243.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	106.40	kPa	248.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	132.70	kPa	253.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	163.90	kPa	258.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K

pvap	200.60	kPa	263.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	243.30	kPa	268.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	292.70	kPa	273.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	349.60	kPa	278.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	414.30	kPa	283.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K

pvap	488.20	kPa	288.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	570.70	kPa	293.15	The investigation on the vapour liquid phase equilibrium of (ammonia + 1,1,1,2-tetrafluoroethane) system over the temperatures ranging from (243.150 to 283.150) K
pvap	571.10	kPa	293.15	Experimental measurements and correlation of isothermal vapor-liquid equilibria for HFC-32 + HFO-1234ze (E) and HFC-134a + HFO-1234ze (E) binary systems
pvap	771.40	kPa	303.15	Experimental measurements and correlation of isothermal vapor-liquid equilibria for HFC-32 + HFO-1234ze (E) and HFC-134a + HFO-1234ze (E) binary systems
pvap	1018.10	kPa	313.15	Experimental measurements and correlation of isothermal vapor-liquid equilibria for HFC-32 + HFO-1234ze (E) and HFC-134a + HFO-1234ze (E) binary systems

pvap	1316.90	kPa	323.14	Experimental measurements and correlation of isothermal vapor-liquid equilibria for HFC-32 + HFO-1234ze (E) and HFC-134a + HFO-1234ze (E) binary systems	
pvap	162.00	kPa	258.20	Experimental Clathrate Hydrate Dissociation Data for Systems Comprising Refrigerant + CaCl ₂ Aqueous Solutions	
pvap	193.00	kPa	262.20	Experimental Clathrate Hydrate Dissociation Data for Systems Comprising Refrigerant + CaCl ₂ Aqueous Solutions	
pvap	286.00	kPa	272.20	Experimental Clathrate Hydrate Dissociation Data for Systems Comprising Refrigerant + CaCl ₂ Aqueous Solutions	
pvap	411.00	kPa	282.60	Experimental Clathrate Hydrate Dissociation Data for Systems Comprising Refrigerant + CaCl ₂ Aqueous Solutions	
pvap	569.00	kPa	292.90	Experimental Clathrate Hydrate Dissociation Data for Systems Comprising Refrigerant + CaCl ₂ Aqueous Solutions	
pvap	763.00	kPa	302.70	Experimental Clathrate Hydrate Dissociation Data for Systems Comprising Refrigerant + CaCl ₂ Aqueous Solutions	

pvap	772.90	kPa	303.30	P-T-x Measurements for 1,1,1,2-Tetrafluoroethane (R134a) + N,N dimethylacetamide (DMA), and N-methyl-2-pyrrolidone (NMP)
pvap	1018.80	kPa	313.15	P-T-x Measurements for 1,1,1,2-Tetrafluoroethane (R134a) + N,N dimethylacetamide (DMA), and N-methyl-2-pyrrolidone (NMP)
pvap	1319.00	kPa	323.15	P-T-x Measurements for 1,1,1,2-Tetrafluoroethane (R134a) + N,N dimethylacetamide (DMA), and N-methyl-2-pyrrolidone (NMP)
pvap	1889.60	kPa	338.30	P-T-x Measurements for 1,1,1,2-Tetrafluoroethane (R134a) + N,N dimethylacetamide (DMA), and N-methyl-2-pyrrolidone (NMP)
pvap	2605.90	kPa	353.45	P-T-x Measurements for 1,1,1,2-Tetrafluoroethane (R134a) + N,N dimethylacetamide (DMA), and N-methyl-2-pyrrolidone (NMP)
pvap	133.58	kPa	253.13	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	133.60	kPa	253.13	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus

pvap	200.47	kPa	262.99	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	200.48	kPa	263.00	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	295.50	kPa	273.31	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	295.50	kPa	273.31	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	415.71	kPa	283.16	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	415.71	kPa	283.17	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	571.94	kPa	293.22	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	571.98	kPa	293.22	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	771.67	kPa	303.25	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus

pvap	771.76	kPa	303.26	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	1018.09	kPa	313.18	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	1018.15	kPa	313.18	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	1319.76	kPa	323.19	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	1319.87	kPa	323.20	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	1682.95	kPa	333.16	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	1683.15	kPa	333.17	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus
pvap	2110.59	kPa	343.03	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus

pvap	2110.88	kPa	343.04	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus	
pvap	2633.57	kPa	353.16	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus	
pvap	2633.73	kPa	353.16	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus	
pvap	3245.32	kPa	363.17	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus	
pvap	3245.53	kPa	363.18	Measurement of Vapor Pressures and Saturated Liquid Densities of Pure Fluids with a New Apparatus	
pvap	1013.00	kPa	313.15	Vapor-Liquid Equilibria of the Binary n-Butane (HC-600) + Difluoromethane (HFC-32), + Pentafluoroethane (HFC-125), + 1,1,1,2-Tetrafluoroethane (HFC-134a) Mixture Systems	
pvap	1308.00	kPa	323.15	Vapor-Liquid Equilibria of the Binary n-Butane (HC-600) + Difluoromethane (HFC-32), + Pentafluoroethane (HFC-125), + 1,1,1,2-Tetrafluoroethane (HFC-134a) Mixture Systems	

pvap	1671.00	kPa	333.15	Vapor-Liquid Equilibria of the Binary n-Butane (HC-600) + Difluoromethane (HFC-32), + Pentafluoroethane (HFC-125), + 1,1,1,2-Tetrafluoroethane (HFC-134a) Mixture Systems
pvap	1008.00	kPa	313.15	Vapor-Liquid Equilibria of the Difluoromethane + Dimethyl Ether and 1,1,1,2-Tetrafluoroethane + Dimethyl Ether Systems
pvap	1308.00	kPa	323.15	Vapor-Liquid Equilibria of the Difluoromethane + Dimethyl Ether and 1,1,1,2-Tetrafluoroethane + Dimethyl Ether Systems
pvap	1673.00	kPa	333.15	Vapor-Liquid Equilibria of the Difluoromethane + Dimethyl Ether and 1,1,1,2-Tetrafluoroethane + Dimethyl Ether Systems
pvap	2106.00	kPa	343.15	Vapor-Liquid Equilibria of the Difluoromethane + Dimethyl Ether and 1,1,1,2-Tetrafluoroethane + Dimethyl Ether Systems
pvap	612.00	kPa	295.40	Solubility Measurements of 1,1,1,2-Tetrafluoroethane (R134a) and of Propane in Squalane at Temperatures from (325 to 400) K and Pressures from (0.1 to 1) MPa

pvap	704.40	kPa	300.00	Solubility Measurements of 1,1,1,2-Tetrafluoroethane (R134a) and of Propane in Squalane at Temperatures from (325 to 400) K and Pressures from (0.1 to 1) MPa
pvap	788.50	kPa	304.00	Solubility Measurements of 1,1,1,2-Tetrafluoroethane (R134a) and of Propane in Squalane at Temperatures from (325 to 400) K and Pressures from (0.1 to 1) MPa
pvap	414.40	kPa	283.13	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (R1234yf) for Reduced Temperatures Ranging from 0.67 to 0.93
pvap	571.10	kPa	293.14	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (R1234yf) for Reduced Temperatures Ranging from 0.67 to 0.93
pvap	769.20	kPa	303.12	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (R1234yf) for Reduced Temperatures Ranging from 0.67 to 0.93
pvap	1014.90	kPa	313.11	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (R1234yf) for Reduced Temperatures Ranging from 0.67 to 0.93

pvap	1318.50	kPa	323.17	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (R1234yf) for Reduced Temperatures Ranging from 0.67 to 0.93
pvap	1681.10	kPa	333.16	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (R1234yf) for Reduced Temperatures Ranging from 0.67 to 0.93
pvap	2117.30	kPa	343.16	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (R1234yf) for Reduced Temperatures Ranging from 0.67 to 0.93
pvap	162.00	kPa	258.20	Experimental Measurements and Thermodynamic Modeling of the Dissociation Conditions of Clathrate Hydrates for (Refrigerant + NaCl + Water) Systems
pvap	193.00	kPa	262.20	Experimental Measurements and Thermodynamic Modeling of the Dissociation Conditions of Clathrate Hydrates for (Refrigerant + NaCl + Water) Systems
pvap	286.00	kPa	272.20	Experimental Measurements and Thermodynamic Modeling of the Dissociation Conditions of Clathrate Hydrates for (Refrigerant + NaCl + Water) Systems

pvap	411.00	kPa	282.60	Experimental Measurements and Thermodynamic Modeling of the Dissociation Conditions of Clathrate Hydrates for (Refrigerant + NaCl + Water) Systems
pvap	569.00	kPa	292.90	Experimental Measurements and Thermodynamic Modeling of the Dissociation Conditions of Clathrate Hydrates for (Refrigerant + NaCl + Water) Systems
pvap	763.00	kPa	302.70	Experimental Measurements and Thermodynamic Modeling of the Dissociation Conditions of Clathrate Hydrates for (Refrigerant + NaCl + Water) Systems
pvap	292.80	kPa	273.15	Vapor-Liquid Equilibria for the 1,1,1,2-Tetrafluoroethane (HFC-134a) + n-Butane (R-600) System
pvap	414.60	kPa	283.15	Vapor-Liquid Equilibria for the 1,1,1,2-Tetrafluoroethane (HFC-134a) + n-Butane (R-600) System
pvap	572.00	kPa	293.15	Vapor-Liquid Equilibria for the 1,1,1,2-Tetrafluoroethane (HFC-134a) + n-Butane (R-600) System
pvap	770.20	kPa	303.15	Vapor-Liquid Equilibria for the 1,1,1,2-Tetrafluoroethane (HFC-134a) + n-Butane (R-600) System

pvap	1013.60	kPa	313.15	Vapor-Liquid Equilibria for the 1,1,1,2-Tetrafluoroethane (HFC-134a) + n-Butane (R-600) System
pvap	1312.80	kPa	323.15	Vapor-Liquid Equilibria for the 1,1,1,2-Tetrafluoroethane (HFC-134a) + n-Butane (R-600) System
pvap	131.00	kPa	253.15	Vapor-Liquid Equilibria of the Fluoroethane (R161) + 1,1,1,2-Tetrafluoroethane (R134a) System at Various Temperatures from (253.15 to 292.92) K
pvap	506.90	kPa	289.27	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	353.00	kPa	278.15	Vapor-Liquid Equilibria of the Fluoroethane (R161) + 1,1,1,2-Tetrafluoroethane (R134a) System at Various Temperatures from (253.15 to 292.92) K
pvap	571.00	kPa	292.92	Vapor-Liquid Equilibria of the Fluoroethane (R161) + 1,1,1,2-Tetrafluoroethane (R134a) System at Various Temperatures from (253.15 to 292.92) K
pvap	84.23	kPa	243.10	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (HFO-1234yf)

pvap	106.12	kPa	248.08	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (HFO-1234yf)
pvap	199.39	kPa	263.01	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (HFO-1234yf)
pvap	412.95	kPa	283.03	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (HFO-1234yf)
pvap	769.50	kPa	303.12	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (HFO-1234yf)
pvap	1487.96	kPa	328.05	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (HFO-1234yf)
pvap	2620.85	kPa	352.93	Saturated Pressure Measurements of 2,3,3,3-Tetrafluoroprop-1-ene (HFO-1234yf)
pvap	669.60	kPa	298.44	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	775.70	kPa	303.45	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	892.20	kPa	308.44	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer

pvap	1018.80	kPa	313.30	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	1165.40	kPa	318.39	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	1319.00	kPa	323.30	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	1492.40	kPa	328.26	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	1683.70	kPa	333.30	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer

pvap	1889.60	kPa	338.24	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	2115.30	kPa	343.23	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	2352.50	kPa	348.22	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	2605.90	kPa	353.10	Isothermal Vapor-Liquid Equilibrium Data of 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylformamide (DMF) Working Fluids for an Absorption Heat Transformer
pvap	775.70	kPa	303.45	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)

pvap	892.20	kPa	308.44	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)
pvap	1018.80	kPa	313.30	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)
pvap	1165.40	kPa	318.39	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)
pvap	1319.00	kPa	323.30	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)

pvap	1492.40	kPa	328.26	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)
pvap	1683.70	kPa	333.30	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)
pvap	1889.60	kPa	338.24	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)
pvap	2115.30	kPa	343.23	p-T-x Measurements for Some Working Fluids for an Absorption Heat Transformer: 1,1,1,2-Tetrafluoroethane (R134a) + Dimethylether Diethylene Glycol (DMEDEG) and Dimethylether Triethylene Glycol (DMETrEG)

pvap	475.40	kPa	287.27	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	445.40	kPa	285.26	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	416.70	kPa	283.24	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	389.70	kPa	281.25	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	364.00	kPa	279.24	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa

pvap	339.50	kPa	277.22	Vapour liquid equilibrium data for the 1,1,1,2 tetrafluoroethane (R134a) + dimethyl ether (DME) system at temperatures from 293.18 to 358.15K and pressures up to about 3 MPa up to about 3MPa
pvap	203.00	kPa	263.15	Vapor-Liquid Equilibria of the Fluoroethane (R161) + 1,1,1,2-Tetrafluoroethane (R134a) System at Various Temperatures from (253.15 to 292.92) K

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.41969e+01
Coeff. B	-2.08778e+03
Coeff. C	-2.86360e+01
Temperature range (K), min.	172.00
Temperature range (K), max.	374.21

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	4.84910e+01
Coeff. B	-3.73115e+03
Coeff. C	-5.32695e+00
Coeff. D	9.21593e-06
Temperature range (K), min.	172.15
Temperature range (K), max.	380.00

Datasets

Mass density, kg/m3

Temperature, K - Liquid	Pressure, kPa - Liquid	Mass density, kg/m3 - Liquid
303.26	1000.00	1188.74
283.52	1010.00	1262.83
323.07	1280.00	1102.44
343.05	2090.00	997.14
343.03	4990.00	1045.24
303.27	5000.00	1212.6
323.08	5000.00	1136.68
362.95	5000.00	921.91
283.53	5000.00	1279.7
283.54	10000.00	1298.2
323.08	10000.00	1170.98
343.02	10000.00	1097.0
362.95	10000.00	1012.79
303.28	10000.00	1237.15
303.29	19980.00	1275.91
283.54	20000.00	1329.16
343.02	20000.00	1162.16
362.96	20000.00	1101.23
323.09	20000.00	1220.67
343.02	39990.00	1241.93
283.54	39990.00	1376.78
362.97	40000.00	1196.59
323.12	40000.00	1287.6
303.29	40010.00	1332.33
323.11	60000.00	1335.02
362.98	60000.00	1257.2
303.30	60000.00	1374.15
343.02	60010.00	1295.73
283.54	60010.00	1413.66
303.30	79980.00	1408.2
323.11	80000.00	1372.84
362.99	80000.00	1302.95
343.03	80010.00	1337.58
283.54	80020.00	1444.29

Temperature, K	Pressure, kPa	Mass density, kg/m3
283.26	1000.00	1265.88
283.26	5000.00	1282.35
283.26	10000.00	1300.86
283.26	20000.00	1331.64
283.26	40000.00	1379.61
283.25	60000.00	1416.44
283.26	80000.00	1446.35
302.85	1000.00	1190.34
302.85	5000.00	1214.03
302.85	10000.00	1238.45
302.84	20000.00	1276.99
302.84	40000.00	1333.11
302.85	60000.00	1374.79
302.84	80000.00	1408.64
322.62	5000.00	1140.59
322.63	10000.00	1174.6
322.63	20000.00	1224.02
322.64	40000.00	1290.68
322.64	60000.00	1338.04
322.64	80000.00	1375.39
342.56	5000.00	1047.23
342.56	10000.00	1098.48
342.56	20000.00	1163.35
342.56	40000.00	1242.84
342.57	60000.00	1296.48
342.57	80000.00	1337.6
362.57	5000.00	924.58
362.58	10000.00	1014.86
362.58	20000.00	1102.88
362.58	40000.00	1197.86
362.58	60000.00	1258.31
362.58	80000.00	1303.78

Temperature, K	Pressure, kPa	Mass density, kg/m3
303.27	1010.00	1188.92
303.27	5010.00	1212.9

303.26	10020.00	1237.53
303.26	20020.00	1276.18
303.27	40000.00	1332.27
303.27	59990.00	1374.03
303.29	79930.00	1408.19
322.47	5000.00	1139.41
322.48	10000.00	1173.46
322.48	19990.00	1222.36
322.48	40000.00	1289.13
322.48	60010.00	1336.26
322.48	80000.00	1373.47
342.86	5010.00	1045.93
342.87	10010.00	1097.7
342.88	20010.00	1162.75
342.89	40000.00	1242.46
342.89	60010.00	1296.15
342.89	80000.00	1337.87
362.81	5000.00	921.95
362.82	10010.00	1013.37
362.83	20010.00	1101.82
362.83	40010.00	1197.04
362.84	60000.00	1257.56
362.84	79990.00	1303.5

Reference

<https://www.doi.org/10.1016/j.jct.2014.05.017>

Temperature, K	Pressure, kPa	Mass density, kg/m3
283.61	1000.00	1262.74
283.61	5000.00	1279.71
283.61	10000.00	1298.25
283.61	20000.00	1329.21
283.59	40000.00	1376.92
283.59	60000.00	1413.86
283.60	80000.00	1444.35
303.46	1000.00	1188.35
303.46	5000.00	1212.37
303.46	10000.00	1237.01
303.46	20000.00	1275.97
303.46	40000.00	1332.37
303.47	60000.00	1374.37
303.47	80000.00	1408.33
323.24	3000.00	1119.53
323.24	5000.00	1136.67

323.24	10000.00	1171.08
323.24	20000.00	1220.9
323.24	40000.00	1287.9
323.24	60000.00	1335.45
323.25	80000.00	1373.28
343.03	3000.00	1015.76
343.01	5000.00	1046.15
343.02	10000.00	1098.02
343.02	20000.00	1163.58
343.03	40000.00	1243.36
343.03	60000.00	1297.19
343.03	80000.00	1338.42
362.73	5000.00	923.63
362.75	10000.00	1014.58
362.75	20000.00	1102.91
362.75	40000.00	1198.13
362.74	60000.00	1258.69
362.74	80000.00	1304.07

Reference

<https://www.doi.org/10.1016/j.jct.2016.05.013>

Temperature, K	Pressure, kPa	Mass density, kg/m3
283.46	1000.00	1262.57
283.46	5000.00	1279.58
283.47	10000.00	1298.12
283.47	20000.00	1329.18
283.47	40000.00	1377.11
283.47	60000.00	1414.44
283.47	80000.00	1445.46
303.38	1000.00	1188.07
303.38	5000.00	1212.13
303.37	10000.00	1236.85
303.37	20000.00	1275.77
303.38	40000.00	1332.36
303.38	60000.00	1374.64
303.38	80000.00	1408.98
323.15	3000.00	1119.19
323.16	5000.00	1136.38
323.16	10000.00	1170.84
323.16	20000.00	1220.65
323.16	40000.00	1287.71
323.16	60000.00	1335.49
323.16	80000.00	1373.39

342.97	3000.00	1014.76
342.97	5000.00	1045.25
342.98	10000.00	1097.42
342.98	20000.00	1162.91
342.98	40000.00	1242.75
342.99	60000.00	1296.65
342.98	80000.00	1338.34
362.68	5000.00	922.4
362.68	10000.00	1013.83
362.68	20000.00	1102.6
362.68	40000.00	1197.86
362.68	60000.00	1258.47
362.68	80000.00	1304.15

Reference

<https://www.doi.org/10.1021/acs.jced.5b00385>

Temperature, K	Pressure, kPa	Mass density, kg/m3
283.57	5000.00	1279.4
283.57	10000.00	1297.9
283.56	20000.00	1328.7
283.55	40000.00	1376.3
283.55	60000.00	1413.1
283.55	80000.00	1443.2
303.39	1000.00	1188.5
303.39	5000.00	1212.5
303.39	10000.00	1237.0
303.39	20000.00	1275.9
303.39	40000.00	1332.1
303.40	60000.00	1373.9
303.39	80000.00	1407.4
322.89	3000.00	1120.9
322.91	5000.00	1137.8
322.91	10000.00	1172.0
322.93	20000.00	1221.5
322.93	40000.00	1288.4
322.93	60000.00	1335.8
322.94	80000.00	1372.8
342.75	3000.00	1017.4
342.75	5000.00	1047.5
342.76	10000.00	1098.8
342.77	20000.00	1164.1
342.77	40000.00	1243.6
342.78	60000.00	1297.3

342.78	80000.00	1338.2
362.57	5000.00	924.9
362.57	10000.00	1015.4
362.58	20000.00	1103.4
362.59	40000.00	1198.4
362.59	60000.00	1258.8
362.59	80000.00	1303.8

Reference

<https://www.doi.org/10.1021/acs.jced.8b00229>

Pressure, kPa	Temperature, K	Mass density, kg/m3
5000.00	308.00	1150.0
10100.00	308.00	1180.0
15400.00	308.00	1210.0
19600.00	288.00	1290.0
19600.00	298.00	1270.0
19600.00	308.00	1240.0
19600.00	318.00	1210.0
19600.00	328.00	1180.0
19600.00	308.00	1240.0
23700.00	308.00	1260.0

Reference

<https://www.doi.org/10.1021/je801009z>

Amount density, mol/m3

Temperature, K - Gas	Pressure, kPa - Gas	Amount density, mol/m3 - Gas
353.17	1761.50	776.7
353.17	1359.70	555.7
353.17	1026.00	397.6
353.17	762.10	284.5
353.17	559.90	203.6
353.17	408.20	145.7
353.17	296.00	104.2
353.17	213.80	74.57
413.17	2606.80	918.8
413.17	1968.80	657.4
413.17	1464.60	470.4
413.17	1077.60	336.6
413.17	786.70	240.8

413.17	571.00	172.3
413.17	412.80	123.3
413.17	297.50	88.22
413.17	214.00	63.12

Reference

<https://www.doi.org/10.1021/acs.jced.7b00263>

Self diffusion coefficient, m²/s

Pressure, kPa - Liquid	Temperature, K - Liquid	Self diffusion coefficient, m ² /s - Liquid
670.00	298.15	0.0000

Reference

<https://www.doi.org/10.1016/j.fluid.2016.11.022>

Thermal conductivity, W/m/K

Temperature, K - Fluid (supercritical or subcritical phases)	Pressure, kPa - Fluid (supercritical or subcritical phases)	Thermal conductivity, W/m/K - Fluid (supercritical or subcritical phases)
299.29	170.00	0.0129
299.63	170.00	0.0128
318.97	740.00	0.0149
318.97	740.00	0.0149
319.14	160.00	0.0146
345.58	180.00	0.0171
346.36	180.00	0.0174
348.54	180.00	0.0173
351.84	640.00	0.0176
363.88	180.00	0.0189
365.00	180.00	0.0189
365.41	180.00	0.0189
365.69	180.00	0.0189
366.52	180.00	0.0189
366.80	180.00	0.0189
372.42	680.00	0.0198
372.43	170.00	0.0197
372.43	680.00	0.0197
378.07	180.00	0.0200

378.63	440.00	0.0202
378.74	180.00	0.0201
378.90	330.00	0.0203
379.17	300.00	0.0202
379.43	150.00	0.0204
379.72	160.00	0.0200
392.65	180.00	0.0214
426.86	160.00	0.0247
436.44	180.00	0.0254
446.25	200.00	0.0267
446.25	760.00	0.0266
451.17	180.00	0.0268
455.69	100.00	0.0268
455.92	680.00	0.0272
466.31	650.00	0.0285
476.24	100.00	0.0292
496.18	100.00	0.0311
515.97	100.00	0.0330

Reference

<https://www.doi.org/10.1021/je900210h>

Molar volume, m3/mol

Temperature, K - Gas	Pressure, kPa - Gas	Molar volume, m3/mol - Gas
253.09	107.60	0.0187
272.92	158.90	0.0136
282.69	329.10	0.0065
282.80	121.40	0.0188
292.87	171.90	0.0136
292.89	126.20	0.0188
302.58	357.70	0.0065
313.10	135.40	0.0188
313.10	184.90	0.0136
323.07	386.50	0.0065
333.03	144.30	0.0188
333.03	1610.80	0.0012
333.05	197.50	0.0136
342.96	413.70	0.0065
343.00	1706.90	0.0012
352.93	153.20	0.0188
352.94	1798.60	0.0012

353.04	210.00	0.0136
362.89	440.70	0.0065
362.90	1888.60	0.0012
372.82	454.00	0.0065
372.84	162.10	0.0188
372.87	1976.60	0.0013
372.99	222.40	0.0136

Reference

<https://www.doi.org/10.1021/je100102q>

Viscosity, Pa*s

Temperature, K - Fluid (supercritical or subcritical phases)	Pressure, kPa - Fluid (supercritical or subcritical phases)	Viscosity, Pa*s - Fluid (supercritical or subcritical phases)
293.15	10000.00	0.0002550
293.15	25000.00	0.0003008
293.15	50000.00	0.0003631
293.15	100000.00	0.0005045
293.15	150000.00	0.0006605
293.15	200000.00	0.0008252
298.15	10000.00	0.0002368
298.15	25000.00	0.0002795
298.15	50000.00	0.0003435
298.15	100000.00	0.0004988
298.15	150000.00	0.0006459
298.15	200000.00	0.0008190
298.15	250000.00	0.0009773
313.15	10000.00	0.0002070
313.15	25000.00	0.0002461
313.15	50000.00	0.0003127
313.15	100000.00	0.0004302
313.15	150000.00	0.0005758
313.15	200000.00	0.0007155
313.15	250000.00	0.0008952
313.15	300000.00	0.0010690
313.15	350000.00	0.0012500
313.15	400000.00	0.0014460
323.15	10000.00	0.0001805
323.15	25000.00	0.0002229
323.15	50000.00	0.0002852
323.15	100000.00	0.0003946

323.15	150000.00	0.0005020
323.15	200000.00	0.0006252
323.15	250000.00	0.0007651
323.15	300000.00	0.0009140
348.15	10000.00	0.0001405
348.15	25000.00	0.0001783
348.15	50000.00	0.0002343
348.15	100000.00	0.0003327
348.15	150000.00	0.0004300
348.15	200000.00	0.0005368
348.15	250000.00	0.0006421
348.15	300000.00	0.0007647
348.15	350000.00	0.0008894
348.15	400000.00	0.0010400
373.15	25000.00	0.0001531
373.15	50000.00	0.0002038
373.15	100000.00	0.0002931
373.15	150000.00	0.0003764
373.15	200000.00	0.0004649
373.15	250000.00	0.0005564
373.15	300000.00	0.0006468
373.15	350000.00	0.0007557
373.15	400000.00	0.0008715
398.15	50000.00	0.0001725
398.15	100000.00	0.0002544
398.15	150000.00	0.0003243
438.15	50000.00	0.0001458
438.15	100000.00	0.0002131
438.15	150000.00	0.0002789
438.15	200000.00	0.0003408
438.15	250000.00	0.0003977
438.15	300000.00	0.0004612

Reference

<https://www.doi.org/10.1007/s10765-011-0978-y>

Temperature, K	Pressure, kPa	Viscosity, Pa*s
253.14	1000.00	0.0003564
253.14	5000.00	0.0003729
253.14	10000.00	0.0003937
253.14	15000.00	0.0004141
253.14	20000.00	0.0004329
253.14	25000.00	0.0004553
253.14	30000.00	0.0004776

273.15	1000.00	0.0002713
273.15	5000.00	0.0002873
273.15	10000.00	0.0003031
273.15	15000.00	0.0003211
273.15	20000.00	0.0003387
273.15	25000.00	0.0003570
273.15	30000.00	0.0003759
293.15	1000.00	0.0002115
293.15	5000.00	0.0002227
293.15	10000.00	0.0002398
293.15	15000.00	0.0002556
293.15	20000.00	0.0002725
293.15	25000.00	0.0002870
293.15	30000.00	0.0003023
313.14	2000.00	0.0001653
313.14	5000.00	0.0001758
313.14	10000.00	0.0001918
313.14	15000.00	0.0002068
313.14	20000.00	0.0002228
313.14	25000.00	0.0002360
313.14	30000.00	0.0002501
333.16	2000.00	0.0001247
333.16	5000.00	0.0001373
333.16	10000.00	0.0001537
333.16	15000.00	0.0001703
333.16	20000.00	0.0001839
333.16	25000.00	0.0001966
333.16	30000.00	0.0002089
353.16	3000.00	0.0000916
353.16	5000.00	0.0001032
353.16	10000.00	0.0001240
353.16	15000.00	0.0001391
353.16	20000.00	0.0001535
353.16	25000.00	0.0001657
353.16	30000.00	0.0001779
253.16	3000.00	0.0003626
253.16	10000.00	0.0003914
273.15	3000.00	0.0002791
273.15	10000.00	0.0003052
293.15	3000.00	0.0002177
293.15	10000.00	0.0002412
313.14	3000.00	0.0001693
313.14	10000.00	0.0001929
333.16	3000.00	0.0001296

333.16	10000.00	0.0001543
353.15	5000.00	0.0001034
353.15	10000.00	0.0001246
Reference		https://www.doi.org/10.1016/j.jct.2013.03.013

Temperature, K	Pressure, kPa	Viscosity, Pa*s
313.50	1796.00	0.0001656
313.01	1763.00	0.0001654
312.96	1701.00	0.0001650
312.83	1706.00	0.0001656
312.82	4048.00	0.0001730
312.76	4069.00	0.0001731
312.75	4064.00	0.0001723
312.77	3061.00	0.0001681
312.78	3061.00	0.0001682
312.78	3042.00	0.0001684
332.81	4011.00	0.0001325
332.81	4008.00	0.0001324
332.80	4005.00	0.0001325
332.80	3079.00	0.0001282
332.79	3083.00	0.0001284
332.79	3072.00	0.0001279
354.96	4007.00	0.0000956
355.51	4078.00	0.0000941
355.94	4155.00	0.0000934
Reference		https://www.doi.org/10.1021/acs.jced.8b00036

Temperature, K	Pressure, kPa	Viscosity, Pa*s
258.15	1000.00	0.0003251
258.15	5000.00	0.0003468
258.15	10000.00	0.0003675
258.15	15000.00	0.0003885
258.15	20000.00	0.0004094
258.15	25000.00	0.0004309
258.15	30000.00	0.0004502
258.15	35000.00	0.0004712
258.15	40000.00	0.0004996
278.14	1000.00	0.0002536
278.14	5000.00	0.0002678
278.14	10000.00	0.0002859

[illegible]

<https://www.doi.org/10.1016/j.ijct.2019.01.028>

<https://www.doi.org/10.1021/je300148f>

<https://www.doi.org/10.1021/je100102a>

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<https://www.doi.org/10.1021/je0201976>

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Equation for HFC-32 + HFO-1234ze (E)
and HFC-134a + HFO-1234ze (E) binary
systems:

Measurement of Viscosity of
cis-1,1,1,4,4,4-Hexafluoro-2-butene
(R125) by Determination of Capillary
Thermal Physical Properties and Critical
Parameters for R125 and Critical Line
(Propano or ethane) R125A:
Exp. (125) (critical point of R125) Properties
in the Gas Phase for (3) near 350 K
pressures up to 10 MPa
for the binary systems of propane +
R125, R125 + ethane and
1,1,1,2-tetrafluoroethane (R134a) and
1,1,1,2,2-pentafluoroethane (R143a)
of small reservoir (225 Equilibrium of
Pressure in the center of R125)
properties of the gas phase for binary +
high pressure (10 MPa) measurements
of critical point of ethane, R125, and
R125 + ethane systems:
N-Methyl-2-pyrrolidone Systems:
P.rho.Tx properties of binary
R134a/R245fa system:
Experimental measurement of vapor
pressures and (vapor + liquid)
equilibrium for
Hydrofluorocarbon (R134a) +
Butane (n-butyl) liquid circulation
hexafluorophosphate windows:

