

Piperidine

Other names:	Azacyclohexane CYCLOPENTIMINE CYPENTIL HEXAZANE Hexahydropyridine Pentamethyleneamine Pentamethyleneimine Pentamethylenimine Perhydropyridine Piperidin Pyridine, hexahydro- UN 2401 hexahydroazine perhydroazine
Inchi:	InChI=1S/C5H11N/c1-2-4-6-5-3-1/h6H,1-5H2
InchiKey:	NQRYJNQNLNOLGT-UHFFFAOYSA-N
Formula:	C5H11N
SMILES:	C1CCNCC1
Mol. weight [g/mol]:	85.15
CAS:	110-89-4

Physical Properties

Property code	Value	Unit	Source
af	0.2510		KDB
affp	954.00	kJ/mol	NIST Webbook
basg	921.00	kJ/mol	NIST Webbook
chl	-3453.20 ± 0.50	kJ/mol	NIST Webbook
chl	-3451.50 ± 2.30	kJ/mol	NIST Webbook
dm	1.20	debye	KDB
gf	111.09	kJ/mol	Joback Method
hf	-49.03	kJ/mol	KDB
hf	-47.15 ± 0.63	kJ/mol	NIST Webbook
hf	-47.15 ± 0.63	kJ/mol	NIST Webbook
hfl	-88.10 ± 2.30	kJ/mol	NIST Webbook
hfl	-86.44 ± 0.59	kJ/mol	NIST Webbook
hfus	9.06	kJ/mol	Joback Method
hvap	41.00	kJ/mol	NIST Webbook

hvap	39.30 ± 0.20	kJ/mol	NIST Webbook
hvap	39.30	kJ/mol	NIST Webbook
ie	8.03 ± 0.11	eV	NIST Webbook
ie	8.65 ± 0.10	eV	NIST Webbook
ie	9.15	eV	NIST Webbook
ie	8.66	eV	NIST Webbook
ie	8.64 ± 0.02	eV	NIST Webbook
ie	8.66 ± 0.03	eV	NIST Webbook
ie	8.70	eV	NIST Webbook
ie	7.90 ± 0.10	eV	NIST Webbook
ie	7.80	eV	NIST Webbook
ie	8.67	eV	NIST Webbook
ie	8.05 ± 0.05	eV	NIST Webbook
ie	8.20 ± 0.05	eV	NIST Webbook
ie	8.64 ± 0.05	eV	NIST Webbook
log10ws	1.07		Aqueous Solubility Prediction Method
logp	0.760		Crippen Method
mcvol	80.430	ml/mol	McGowan Method
nfpaf	%!d(float64=3)		KDB
nfpah	%!d(float64=2)		KDB
nfpas	%!d(float64=3)		KDB
pc	4655.88 ± 202.65	kPa	NIST Webbook
pc	4645.75 ± 202.65	kPa	NIST Webbook
pc	4940.00	kPa	KDB
rinpol	755.00		NIST Webbook
rinpol	790.00		NIST Webbook
rinpol	766.00		NIST Webbook
rinpol	762.00		NIST Webbook
rinpol	769.00		NIST Webbook
rinpol	771.00		NIST Webbook
rinpol	762.00		NIST Webbook
rinpol	790.00		NIST Webbook
rinpol	764.00		NIST Webbook
rinpol	775.00		NIST Webbook
rinpol	782.00		NIST Webbook
rinpol	742.00		NIST Webbook
rinpol	751.00		NIST Webbook
rinpol	761.00		NIST Webbook
rinpol	790.00		NIST Webbook
rinpol	775.00		NIST Webbook
rinpol	767.00		NIST Webbook
rinpol	750.00		NIST Webbook
rinpol	755.00		NIST Webbook

ripol	770.00		NIST Webbook
ripol	1125.00		NIST Webbook
ripol	1049.00		NIST Webbook
ripol	1042.00		NIST Webbook
ripol	1088.00		NIST Webbook
ripol	1115.00		NIST Webbook
ripol	1097.00		NIST Webbook
ripol	1074.00		NIST Webbook
ripol	1100.00		NIST Webbook
sl	209.94	J/molxK	NIST Webbook
sl	209.97	J/molxK	NIST Webbook
sl	209.94	J/molxK	NIST Webbook
tb	379.37	K	KDB
tc	594.00 ± 0.30	K	NIST Webbook
tc	594.10 ± 0.02	K	NIST Webbook
tc	594.10	K	KDB
tf	262.12	K	KDB
tt	262.10 ± 0.03	K	NIST Webbook
tt	262.12 ± 0.05	K	NIST Webbook
tt	262.12 ± 0.02	K	NIST Webbook
vc	0.288	m3/kmol	KDB
zc	0.2880200		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	186.37	J/molxK	531.01	Joback Method
cpg	197.43	J/molxK	567.13	Joback Method
cpg	149.38	J/molxK	422.68	Joback Method
cpg	162.36	J/molxK	458.79	Joback Method
cpg	135.73	J/molxK	386.57	Joback Method
cpg	174.68	J/molxK	494.90	Joback Method
cpg	207.88	J/molxK	603.24	Joback Method
cpl	179.86	J/molxK	298.15	NIST Webbook
cpl	170.70	J/molxK	290.00	NIST Webbook
cpl	186.20	J/molxK	290.00	NIST Webbook
cpl	179.85	J/molxK	298.15	NIST Webbook
cpl	179.86	J/molxK	298.15	NIST Webbook
cpl	181.60	J/molxK	298.00	NIST Webbook
cpl	182.76	J/molxK	297.39	NIST Webbook
hfust	14.85	kJ/mol	262.12	NIST Webbook

hfust	14.85	kJ/mol	262.12	NIST Webbook
hfust	14.85	kJ/mol	262.10	NIST Webbook
hvapt	36.60	kJ/mol	338.00	NIST Webbook
hvapt	37.60	kJ/mol	366.00	NIST Webbook
hvapt	35.30	kJ/mol	357.00	NIST Webbook
hvapt	38.60	kJ/mol	298.15	The vaporization enthalpy and vapor pressure of S (+)-methamphetamine at T = 298.15 K by correlation gas chromatography
kvisc	0.0000011	m ² /s	323.15	Densities and Viscosities of Aqueous Solutions of Pyrrolidine and Piperidine from (20 to 50) deg C
kvisc	0.0000015	m ² /s	303.15	Densities and Viscosities of Aqueous Solutions of Pyrrolidine and Piperidine from (20 to 50) deg C
kvisc	0.0000018	m ² /s	293.15	Densities and Viscosities of Aqueous Solutions of Pyrrolidine and Piperidine from (20 to 50) deg C
kvisc	0.0000013	m ² /s	313.15	Densities and Viscosities of Aqueous Solutions of Pyrrolidine and Piperidine from (20 to 50) deg C
pvap	1.75	kPa	283.64	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols

pvap	2.29	kPa	288.07	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	3.06	kPa	293.12	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	3.13	kPa	293.55	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	4.68	kPa	300.97	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	3.13	kPa	293.59	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols

pvap	5.06	kPa	302.66	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	6.01	kPa	305.98	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	6.05	kPa	306.01	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	8.34	kPa	312.85	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
pvap	10.73	kPa	318.34	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols

pvap	3.79	kPa	297.05	Vapor Pressure and Its Temperature Dependence of 28 Organic Compounds: Cyclic Amines, Cyclic Ethers, and Cyclic and Open Chain Secondary Alcohols
rho1	866.26	kg/m3	288.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	876.35	kg/m3	277.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	875.89	kg/m3	277.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	875.44	kg/m3	278.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	874.98	kg/m3	278.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	874.52	kg/m3	279.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	874.07	kg/m3	279.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	873.61	kg/m3	280.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	873.15	kg/m3	280.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	872.69	kg/m3	281.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	872.24	kg/m3	281.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	871.78	kg/m3	282.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	871.32	kg/m3	282.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	870.86	kg/m3	283.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	870.40	kg/m3	283.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	869.94	kg/m3	284.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	869.49	kg/m ³	284.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	869.03	kg/m ³	285.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	868.57	kg/m ³	285.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	868.11	kg/m ³	286.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	867.65	kg/m ³	286.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	867.18	kg/m ³	287.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	866.72	kg/m ³	287.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	876.80	kg/m ³	276.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	865.80	kg/m3	288.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	865.34	kg/m3	289.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	864.88	kg/m3	289.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	864.42	kg/m3	290.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	863.96	kg/m3	290.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	863.49	kg/m3	291.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	863.03	kg/m3	291.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	862.57	kg/m3	292.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	862.10	kg/m3	292.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	861.64	kg/m ³	293.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	861.18	kg/m ³	293.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	860.71	kg/m ³	294.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	860.25	kg/m ³	294.64	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	859.79	kg/m ³	295.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	859.32	kg/m ³	295.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	858.86	kg/m ³	296.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	858.39	kg/m ³	296.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	857.93	kg/m3	297.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	857.46	kg/m3	297.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	857.00	kg/m3	298.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	856.53	kg/m3	298.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	856.06	kg/m3	299.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	855.60	kg/m3	299.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	855.13	kg/m3	300.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	854.66	kg/m3	300.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	854.20	kg/m3	301.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	853.73	kg/m ³	301.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	853.26	kg/m ³	302.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	852.79	kg/m ³	302.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	852.33	kg/m ³	303.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	851.86	kg/m ³	303.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	851.39	kg/m ³	304.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	850.92	kg/m ³	304.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	850.45	kg/m ³	305.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	849.98	kg/m3	305.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	849.51	kg/m3	306.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	849.04	kg/m3	306.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	848.57	kg/m3	307.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	848.10	kg/m3	307.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	847.63	kg/m3	308.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	847.16	kg/m3	308.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	846.69	kg/m3	309.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	846.22	kg/m3	309.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	845.75	kg/m ³	310.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	845.28	kg/m ³	310.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	844.81	kg/m ³	311.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	844.33	kg/m ³	311.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	843.86	kg/m ³	312.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	843.39	kg/m ³	312.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	842.92	kg/m ³	313.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	842.45	kg/m ³	313.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	841.97	kg/m3	314.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	841.50	kg/m3	314.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	841.03	kg/m3	315.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	840.54	kg/m3	315.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	840.07	kg/m3	316.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	839.60	kg/m3	316.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	839.12	kg/m3	317.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	838.64	kg/m3	317.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	837.69	kg/m3	318.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	837.22	kg/m ³	319.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	877.26	kg/m ³	276.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	836.27	kg/m ³	320.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	835.79	kg/m ³	320.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	835.31	kg/m ³	321.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	834.84	kg/m ³	321.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	834.36	kg/m ³	322.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	833.88	kg/m ³	322.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	833.41	kg/m3	323.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	832.93	kg/m3	323.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	832.45	kg/m3	324.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	831.97	kg/m3	324.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	831.49	kg/m3	325.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	831.02	kg/m3	325.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	830.54	kg/m3	326.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	830.06	kg/m3	326.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	829.58	kg/m3	327.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	829.10	kg/m3	327.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	828.62	kg/m3	328.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	828.14	kg/m3	328.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	827.66	kg/m3	329.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	827.18	kg/m3	329.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	826.70	kg/m3	330.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	826.22	kg/m3	330.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	825.74	kg/m3	331.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	825.25	kg/m3	331.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	824.77	kg/m3	332.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	824.29	kg/m3	332.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	823.81	kg/m3	333.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	823.32	kg/m3	333.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	822.84	kg/m3	334.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	822.36	kg/m3	334.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	821.87	kg/m3	335.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	821.39	kg/m3	335.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	820.91	kg/m ³	336.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	820.42	kg/m ³	336.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	819.94	kg/m ³	337.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	819.45	kg/m ³	337.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	818.97	kg/m ³	338.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	818.48	kg/m ³	338.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	818.00	kg/m ³	339.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	817.51	kg/m ³	339.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	817.03	kg/m3	340.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	816.54	kg/m3	340.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	816.05	kg/m3	341.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	815.57	kg/m3	341.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	815.08	kg/m3	342.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	814.59	kg/m3	342.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	814.10	kg/m3	343.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	813.62	kg/m3	343.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	813.13	kg/m3	344.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	812.64	kg/m ³	344.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	812.15	kg/m ³	345.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	811.66	kg/m ³	345.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	811.17	kg/m ³	346.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	810.68	kg/m ³	346.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	810.19	kg/m ³	347.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	809.70	kg/m ³	347.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	809.21	kg/m ³	348.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	808.72	kg/m3	348.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	808.23	kg/m3	349.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	807.74	kg/m3	349.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	807.25	kg/m3	350.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	877.71	kg/m3	275.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	806.26	kg/m3	351.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	805.77	kg/m3	351.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	805.28	kg/m3	352.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	804.78	kg/m3	352.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho	804.29	kg/m ³	353.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	803.79	kg/m ³	353.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	803.30	kg/m ³	354.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	802.80	kg/m ³	354.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	802.31	kg/m ³	355.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	801.81	kg/m ³	355.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	801.32	kg/m ³	356.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho	800.82	kg/m ³	356.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	800.33	kg/m3	357.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	799.83	kg/m3	357.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	799.33	kg/m3	358.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	798.83	kg/m3	358.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	798.34	kg/m3	359.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	797.84	kg/m3	359.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	797.34	kg/m3	360.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	796.84	kg/m3	360.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	796.34	kg/m3	361.16	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	795.84	kg/m3	361.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	795.34	kg/m3	362.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	794.84	kg/m3	362.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	794.34	kg/m3	363.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	878.17	kg/m3	275.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	878.62	kg/m3	274.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	879.08	kg/m3	274.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	879.53	kg/m3	273.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling

rho1	879.98	kg/m3	273.15	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	831.40	kg/m3	323.05	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	833.50	kg/m3	321.15	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	835.30	kg/m3	319.15	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	837.70	kg/m3	317.35	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	840.80	kg/m3	315.15	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	842.20	kg/m3	313.75	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	846.30	kg/m3	310.35	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	850.60	kg/m3	308.25	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	852.50	kg/m3	306.45	Thermodynamic properties of aqueous solutions of pyridine and piperidine

rho1	852.60	kg/m3	304.55	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	852.40	kg/m3	302.65	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	856.30	kg/m3	300.05	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	864.60	kg/m3	298.15	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	867.10	kg/m3	296.05	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	873.50	kg/m3	293.65	Thermodynamic properties of aqueous solutions of pyridine and piperidine
rho1	862.00	kg/m3	293.00	KDB
rho1	836.74	kg/m3	319.65	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
rho1	806.75	kg/m3	350.66	Volumetric properties of (piperidine + water) binary system: Measurements and modeling
sfust	56.64	J/molxK	262.12	NIST Webbook
sfust	56.67	J/molxK	262.12	NIST Webbook
speedsl	1257.40	m/s	323.00	Speed of sound and isentropic compressibility of aqueous solutions of pyrrolidine and piperidine

speedsl	1299.90	m/s	313.00	Speed of sound and isentropic compressibility of aqueous solutions of pyrrolidine and piperidine
speedsl	1342.30	m/s	303.00	Speed of sound and isentropic compressibility of aqueous solutions of pyrrolidine and piperidine
speedsl	1384.40	m/s	293.00	Speed of sound and isentropic compressibility of aqueous solutions of pyrrolidine and piperidine
srf	0.03	N/m	313.15	Surface Behavior of Aqueous Solutions of Pyrrolidine and Piperidine
srf	0.03	N/m	303.15	Surface Behavior of Aqueous Solutions of Pyrrolidine and Piperidine
srf	0.03	N/m	298.15	Surface Behavior of Aqueous Solutions of Pyrrolidine and Piperidine
srf	0.03	N/m	293.15	Surface Behavior of Aqueous Solutions of Pyrrolidine and Piperidine
srf	0.03	N/m	323.15	Surface Behavior of Aqueous Solutions of Pyrrolidine and Piperidine
srf	0.03	N/m	298.15	Densities, Viscosities, Surface Tensions, and Speeds of Sound of Aqueous Solutions of Piperidine + Pyrrolidine + Water

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	290.90	K	2.70	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.44573e+01
Coeff. B	-3.29413e+03
Coeff. C	-4.43940e+01
Temperature range (K), min.	262.65
Temperature range (K), max.	404.57

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	5.93402e+01
Coeff. B	-6.31943e+03
Coeff. C	-6.49354e+00
Coeff. D	3.50313e-06
Temperature range (K), min.	262.65
Temperature range (K), max.	594.05

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Legend

af:	Acentric Factor
affp:	Proton affinity
basg:	Gas basicity
chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dm:	Dipole Moment
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
kvisc:	Kinematic viscosity
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
nfpaf:	NFPA Fire Rating
nfpah:	NFPA Health Rating
nfpas:	NFPA Safety Rating
pc:	Critical Pressure
vpap:	Vapor pressure

rho:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
speedsl:	Speed of sound in fluid
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume
zc:	Critical Compressibility

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<https://www.cheméo.com/cid/48-358-2/Piperidine.pdf>

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