

Pyridine, 4-methyl-

Other names:	.gamma.-picoline 4-Methylpyridine 4-PICOLINE Ba 35846 GAMMA-PICOLINE NSC 18252 p-Methylpyridine p-Picoline para-Methylpyridine «gamma»-Methylpyridine «gamma»-Picoline Â«gammaÂ»-Methylpyridine Â«gammaÂ»-Picoline
Inchi:	InChI=1S/C6H7N/c1-6-2-4-7-5-3-6/h2-5H,1H3
InchiKey:	FKNQCJSGGFJEIZ-UHFFFAOYSA-N
Formula:	C6H7N
SMILES:	Cc1ccncc1
Mol. weight [g/mol]:	93.13
CAS:	108-89-4

Physical Properties

Property code	Value	Unit	Source
af	0.3010		KDB
affp	947.20	kJ/mol	NIST Webbook
basg	915.30	kJ/mol	NIST Webbook
chl	-3417.00	kJ/mol	NIST Webbook
chl	-3418.30 ± 0.63	kJ/mol	NIST Webbook
chl	-3420.70 ± 0.84	kJ/mol	NIST Webbook
dvisc	0.0008723	Paxs	Density and Viscosity of (4-Picoline + Water) Binary Mixtures from T) (298.15 to 338.15) K
hf	102.20 ± 0.63	kJ/mol	NIST Webbook
hf	92.70	kJ/mol	NIST Webbook
hf	103.80 ± 0.92	kJ/mol	NIST Webbook
hf	102.30	kJ/mol	KDB
hf	102.13 ± 0.63	kJ/mol	NIST Webbook
hfl	48.07	kJ/mol	NIST Webbook

rinpol	841.00	NIST Webbook
rinpol	131.86	NIST Webbook
rinpol	865.00	NIST Webbook
rinpol	860.00	NIST Webbook
rinpol	845.00	NIST Webbook
rinpol	843.00	NIST Webbook
rinpol	877.00	NIST Webbook
rinpol	881.00	NIST Webbook
rinpol	843.10	NIST Webbook
rinpol	877.00	NIST Webbook
rinpol	852.00	NIST Webbook
rinpol	864.00	NIST Webbook
rinpol	843.30	NIST Webbook
rinpol	846.00	NIST Webbook
rinpol	844.00	NIST Webbook
rinpol	843.00	NIST Webbook
rinpol	843.00	NIST Webbook
rinpol	846.00	NIST Webbook
rinpol	863.00	NIST Webbook
rinpol	845.00	NIST Webbook
rinpol	850.00	NIST Webbook
rinpol	843.30	NIST Webbook
ripol	1297.00	NIST Webbook
ripol	1350.00	NIST Webbook
ripol	1346.00	NIST Webbook
ripol	1294.00	NIST Webbook
ripol	1308.00	NIST Webbook
ripol	1309.00	NIST Webbook
ripol	1310.00	NIST Webbook
ripol	1303.00	NIST Webbook
ripol	1320.00	NIST Webbook
ripol	1320.00	NIST Webbook
ripol	1322.00	NIST Webbook
ripol	1316.00	NIST Webbook
ripol	1345.00	NIST Webbook
ripol	1298.00	NIST Webbook
ripol	1298.00	NIST Webbook
ripol	1298.00	NIST Webbook
ripol	1300.00	NIST Webbook
ripol	1296.00	NIST Webbook
ripol	1296.00	NIST Webbook
ripol	1297.00	NIST Webbook
ripol	1300.00	NIST Webbook
ripol	1345.00	NIST Webbook

ripol	1309.00		NIST Webbook
ripol	1289.00		NIST Webbook
ripol	1303.00		NIST Webbook
ripol	1310.00		NIST Webbook
ripol	1289.00		NIST Webbook
ripol	1354.00		NIST Webbook
sl	208.22	J/molxK	NIST Webbook
sl	209.09	J/molxK	NIST Webbook
sl	208.22	J/molxK	NIST Webbook
tb	418.51	K	KDB
tc	646.00	K	NIST Webbook
tc	645.65 ± 0.50	K	NIST Webbook
tc	645.70	K	KDB
tc	646.30 ± 0.50	K	NIST Webbook
tf	276.81	K	KDB
tt	276.80 ± 0.03	K	NIST Webbook
tt	276.81 ± 0.02	K	NIST Webbook
tt	276.80 ± 1.00	K	NIST Webbook
vc	0.292	m3/kmol	KDB
zc	0.2556310		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpl	155.88	J/molxK	293.15	Excess heat capacities of 1-methyl pyrrolidin-2-one and pyridine orpicolines mixtures
cpl	158.99	J/molxK	298.15	NIST Webbook
cpl	158.99	J/molxK	298.15	NIST Webbook
cpl	158.99	J/molxK	298.15	NIST Webbook
cpl	160.84	J/molxK	303.15	Excess heat capacities of 1-methyl pyrrolidin-2-one and pyridine orpicolines mixtures

cpl	158.52	J/molxK	298.15	Excess heat capacities of 1-methyl pyrrolidin-2-one and pyridine orpicolines mixtures
hsubt	62.70	kJ/mol	226.00	NIST Webbook
hvapt	42.10	kJ/mol	347.50	NIST Webbook
hvapt	40.00	kJ/mol	420.50	NIST Webbook
hvapt	37.90	kJ/mol	512.50	NIST Webbook
hvapt	37.20	kJ/mol	605.00	NIST Webbook
hvapt	41.40	kJ/mol	403.50	NIST Webbook
hvapt	43.90 ± 0.10	kJ/mol	313.00	NIST Webbook
hvapt	42.90 ± 0.10	kJ/mol	328.00	NIST Webbook
hvapt	37.51	kJ/mol	418.50	NIST Webbook
hvapt	43.40 ± 0.10	kJ/mol	393.50	NIST Webbook
hvapt	41.10 ± 0.10	kJ/mol	393.50	NIST Webbook
hvapt	38.80 ± 0.10	kJ/mol	393.50	NIST Webbook
hvapt	36.20 ± 0.20	kJ/mol	393.50	NIST Webbook
hvapt	41.40	kJ/mol	404.00	NIST Webbook
hvapt	41.30	kJ/mol	384.00	NIST Webbook
hvapt	42.10 ± 0.10	kJ/mol	343.00	NIST Webbook
rhol	950.18	kg/m3	298.15	Thermodynamic and topological investigations of ternary mixtures with o-toluidine, tetrahydropyran, and picolines: Excess molar volume and excess isentropic compressibility
rhol	949.87	kg/m3	298.15	Determination of Infinite Dilution Partial Molar Excess Enthalpies and Volumes for Some Ionic Liquid Precursors in Water and Methanol Using Tandem Flow Mixing Calorimetry and Vibrating-Tube Densimetry

rho1	955.10	kg/m3	293.15	Thermodynamic Properties of Ternary Mixtures Containing Ionic Liquid and Organic Liquids: Excess Molar Volume and Excess Isentropic Compressibility
rho1	950.18	kg/m3	298.15	Thermodynamic Properties of Ternary Mixtures Containing Ionic Liquid and Organic Liquids: Excess Molar Volume and Excess Isentropic Compressibility
rho1	945.41	kg/m3	303.15	Thermodynamic Properties of Ternary Mixtures Containing Ionic Liquid and Organic Liquids: Excess Molar Volume and Excess Isentropic Compressibility
rho1	950.18	kg/m3	298.15	Thermodynamic studies of molecular interactions in mixtures of o-toulidine with pyridine and picolines: Excess molar volumes, excess molar enthalpies, and excess isentropic compressibilities
rho1	940.82	kg/m3	308.15	Thermodynamic Properties of Ternary Mixtures Containing Ionic Liquid and Organic Liquids: Excess Molar Volume and Excess Isentropic Compressibility
rho1	955.00	kg/m3	293.00	KDB

speedsl	1389.89	m/s	308.15	Thermodynamic properties of binary mixtures of tetrahydropyran with pyridine and isomeric picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities
speedsl	1410.67	m/s	303.15	Thermodynamic properties of binary mixtures of tetrahydropyran with pyridine and isomeric picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities
speedsl	1431.50	m/s	298.15	Thermodynamic properties of binary mixtures of tetrahydropyran with pyridine and isomeric picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities
speedsl	1389.89	m/s	308.15	Topological investigations of binary mixtures containing ionic liquid 1-ethyl-3-methylimidazolium tetrafluoroborate and pyridine or isomeric picolines
speedsl	1410.67	m/s	303.15	Topological investigations of binary mixtures containing ionic liquid 1-ethyl-3-methylimidazolium tetrafluoroborate and pyridine or isomeric picolines

speedsl	1431.50	m/s	298.15	Topological investigations of binary mixtures containing ionic liquid 1-ethyl-3-methylimidazolium tetrafluoroborate and pyridine or isomeric picolines
speedsl	1451.06	m/s	293.15	Topological investigations of binary mixtures containing ionic liquid 1-ethyl-3-methylimidazolium tetrafluoroborate and pyridine or isomeric picolines

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.47098e+01
Coeff. B	-3.72569e+03
Coeff. C	-4.88090e+01
Temperature range (K), min.	276.80
Temperature range (K), max.	445.23

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	7.50954e+01
Coeff. B	-7.72011e+03
Coeff. C	-8.74794e+00
Coeff. D	4.56813e-06
Temperature range (K), min.	276.73
Temperature range (K), max.	646.15

Sources

McGowan Method:

Excess molar enthalpies of ternary mixtures containing o-toluidine + KDB Vapor Pressure Data
Determination of Infinite Dilution Partial Molar Excess Enthalpies and Volumes for Some Ionic Entailment of binary water and containing ionic liquid
Flowing microfluidic molecular interaction of o-toluidine and isonicotinic picolines: Excess molar volumes, excess molar enthalpies, and excess isentropic compressibilities
Solubility of o-toluidine in methanol, methyl acetate and pyridine: Excess molar enthalpies and excess isentropic compressibilities

<http://link.springer.com/article/10.1007/BF02311772>

<https://www.doi.org/10.1016/j.tca.2011.12.023>

<https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1348>

<https://www.doi.org/10.1021/je200093f>

<https://www.doi.org/10.1016/j.jct.2012.07.007>

<https://www.doi.org/10.1016/j.jct.2010.12.028>

https://www.chemeo.com/doc/models/crippen_log10ws

<https://www.doi.org/10.1016/j.tca.2013.07.006>

<https://www.doi.org/10.1016/j.tca.2013.06.033>

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C108894&Units=SI>

KDB:

Solubility of Isonicotinic Acid in 4-Methylpyridine + Water from (287.65 to 309.15) K
Thermodynamic properties of binary mixtures of tetrahydropyran with pyridine and isomeric picolines: Excess molar volumes, excess molar enthalpies and excess isentropic compressibilities
KDB Pure (Korean Thermophysical Properties Databank): Thermodynamic and topological investigations of ternary mixtures with the main anion pyrolysis of ternary mixtures containing ionic liquid and organic solvents
Excess molar enthalpies and excess isentropic compressibilities of binary mixtures of o-toluidine and isonicotinic picolines: Excess molar volumes, excess molar enthalpies, and excess isentropic compressibilities

<https://www.cheric.org/files/research/kdb/mol/mol1348.mol>

<https://www.doi.org/10.1021/je800352u>

<https://www.doi.org/10.1016/j.tca.2011.02.002>

<http://pubs.acs.org/doi/abs/10.1021/ci990307i>

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

<https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1348>

<https://www.doi.org/10.1016/j.jct.2011.10.002>

<https://www.doi.org/10.1021/je4004965>

<https://www.doi.org/10.1021/je8008182>

Legend

af:	Acentric Factor
affp:	Proton affinity
basg:	Gas basicity
chl:	Standard liquid enthalpy of combustion
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hsubt:	Enthalpy of sublimation at a given temperature
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mvol:	McGowan's characteristic volume
nfpaf:	NFPA Fire Rating

nfpah:	NFPA Health Rating
pc:	Critical Pressure
pvap:	Vapor pressure
rhoc:	Critical density
rhol:	Liquid Density
rnpol:	Non-polar retention indices
ripol:	Polar retention indices
sl:	Liquid phase molar entropy at standard conditions
speedsl:	Speed of sound in fluid
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume
zc:	Critical Compressibility

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