

2-Pyrrolidinone, 1-ethenyl-

Other names:	1-Ethenyl-2-pyrrolidinone 1-Vinyl-2-pyrrolidinone 1-Vinyl-2-pyrrolidinone, monomer 1-Vinyl-2-pyrrolidone 1-Vinylpyrrolidinone 1-Vinylpyrrolidone 2-Pyrrolidinone, 1-vinyl- N-Vinyl-2-pyrrolidinone N-Vinyl-2-pyrrolidone N-Vinylpyrrolidinone N-vinylpyrrolidone NSC 10222 V-Pyrol Vinyl-2-pyrrolidone Vinylbutyrolactam Vinylpyrrolidinone Vinylpyrrolidone pyrrolidone, N-vinyl-
Inchi:	InChI=1S/C6H9NO/c1-2-7-5-3-4-6(7)8/h2H,1,3-5H2
InchiKey:	WHNWPMSKXPLAX-UHFFFAOYSA-N
Formula:	C6H9NO
SMILES:	C=CN1CCCC1=O
Mol. weight [g/mol]:	111.14
CAS:	88-12-0

Physical Properties

Property code	Value	Unit	Source
log10ws	-0.92		Crippen Method
logp	0.752		Crippen Method
mcpol	91.790	ml/mol	McGowan Method
rinpol	1102.00		NIST Webbook
rinpol	1102.00		NIST Webbook
rinpol	1077.00		NIST Webbook
rinpol	1102.00		NIST Webbook

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
dvisc	0.0018360	Paxs	338.15	Densities, Viscosities, Speeds of Sound, and Relative Permittivities for Water + Cyclic Amides (2-Pyrrolidinone, 1-Methyl-2-pyrrolidinone, and 1-Vinyl-2-pyrrolidinone) at Different Temperatures
dvisc	0.0022590	Paxs	328.15	Densities, Viscosities, Speeds of Sound, and Relative Permittivities for Water + Cyclic Amides (2-Pyrrolidinone, 1-Methyl-2-pyrrolidinone, and 1-Vinyl-2-pyrrolidinone) at Different Temperatures
dvisc	0.0025900	Paxs	318.15	Densities, Viscosities, Speeds of Sound, and Relative Permittivities for Water + Cyclic Amides (2-Pyrrolidinone, 1-Methyl-2-pyrrolidinone, and 1-Vinyl-2-pyrrolidinone) at Different Temperatures
dvisc	0.0029420	Paxs	308.15	Densities, Viscosities, Speeds of Sound, and Relative Permittivities for Water + Cyclic Amides (2-Pyrrolidinone, 1-Methyl-2-pyrrolidinone, and 1-Vinyl-2-pyrrolidinone) at Different Temperatures

dvisc	0.0043220	Paxs	298.15	Densities, Viscosities, Speeds of Sound, and Relative Permittivities for Water + Cyclic Amides (2-Pyrrolidinone, 1-Methyl-2-pyrrolidinone, and 1-Vinyl-2-pyrrolidinone) at Different Temperatures
hfust	15.28	kJ/mol	286.20	NIST Webbook
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rhol	1017.33	kg/m3	323.15	Density, Refractive Index, and Speed of Sound of the Binary Mixture of 1-Butyl-3-methylimidazolium Tetrafluoroborate + N-Vinyl-2-pyrrolidinone from T = (298.15 to 323.15) K at Atmospheric Pressure
rhol	1026.14	kg/m3	313.15	Density, Refractive Index, and Speed of Sound of the Binary Mixture of 1-Butyl-3-methylimidazolium Tetrafluoroborate + N-Vinyl-2-pyrrolidinone from T = (298.15 to 323.15) K at Atmospheric Pressure
rhol	1030.55	kg/m3	308.15	Density, Refractive Index, and Speed of Sound of the Binary Mixture of 1-Butyl-3-methylimidazolium Tetrafluoroborate + N-Vinyl-2-pyrrolidinone from T = (298.15 to 323.15) K at Atmospheric Pressure

rho1	1034.95	kg/m3	303.15	Density, Refractive Index, and Speed of Sound of the Binary Mixture of 1-Butyl-3-methylimidazolium Tetrafluoroborate + N-Vinyl-2-pyrrolidinone from T = (298.15 to 323.15) K at Atmospheric Pressure
rho1	1039.36	kg/m3	298.15	Density, Refractive Index, and Speed of Sound of the Binary Mixture of 1-Butyl-3-methylimidazolium Tetrafluoroborate + N-Vinyl-2-pyrrolidinone from T = (298.15 to 323.15) K at Atmospheric Pressure
rho1	1021.73	kg/m3	318.15	Density, Refractive Index, and Speed of Sound of the Binary Mixture of 1-Butyl-3-methylimidazolium Tetrafluoroborate + N-Vinyl-2-pyrrolidinone from T = (298.15 to 323.15) K at Atmospheric Pressure

Sources

Crippen Method:

Molecular interaction between binary mixtures 1-butyl-3-methylimidazolium Tetrafluoroborate and Acrylonitrile and Ketones 2-pyrrolidinone at different temperatures. Densities, Speeds of Sound, and Relative Permittivities for Density, Refractive Index, and Speed of Sound of the Binary Mixture of 1-Methyl-2-methylimidazolium Tetrafluoroborate and N-Vinyl-2-pyrrolidinone) at Different Temperatures from T = (298.15 to 323.15) K at Atmospheric Pressure.

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

<https://www.doi.org/10.1016/j.jct.2017.01.014>

<https://www.doi.org/10.1021/acs.jced.8b00126>

<https://www.doi.org/10.1021/je0340809>

<https://www.doi.org/10.1021/je500936y>

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

<http://webbook.nist.gov/cgi/cbook.cgi?ID=C88120&Units=SI>

<http://pubs.acs.org/doi/abs/10.1021/ci9903071>

Legend

dvisc:	Dynamic viscosity
hfust:	Enthalpy of fusion at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
rho:	Liquid Density
rinpol:	Non-polar retention indices

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