N-Ethylformamide

Other names: Ethylformamide

Formamide, N-ethyl-N-Aethylformamid N-Formylethylamine

InChl=1S/C3H7NO/c1-2-4-3-5/h3H,2H2,1H3,(H,4,5)

InchiKey: KERBAAIBDHEFDD-UHFFFAOYSA-N

Formula: C3H7NO
SMILES: CCNC=O
Mol. weight [g/mol]: 73.09
CAS: 627-45-2

Physical Properties

Property code	Value	Unit	Source
gf	-35.75	kJ/mol	Joback Method
hf	-137.36	kJ/mol	Joback Method
hfus	10.91	kJ/mol	Joback Method
hvap	58.40	kJ/mol	NIST Webbook
hvap	58.44	kJ/mol	NIST Webbook
log10ws	-0.04		Crippen Method
logp	-0.248		Crippen Method
mcvol	64.680	ml/mol	McGowan Method
рс	4966.33	kPa	Joback Method
rinpol	794.00		NIST Webbook
tb	471.20	K	NIST Webbook
tc	546.91	K	Joback Method
tf	218.23	K	Joback Method
VC	0.256	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	147.28	J/mol×K	546.91	Joback Method
cpg	142.03	J/mol×K	516.90	Joback Method
срд	136.55	J/mol×K	486.90	Joback Method

cpg	130.83	J/mol×K	456.89	Joback Method
cpg	124.86	J/mol×K	426.88	Joback Method
cpg	118.65	J/mol×K	396.88	Joback Method
cpg	112.17	J/mol×K	366.87	Joback Method
rhol	930.45	kg/m3	318.15	Volumetric Properties of Binary Mixtures of
			Tris(pen	Butyl-1-Methylpyrrolidinium tafluoroethyl)trifluorophosphate with N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide, and N,N-Dimethylacetamide from (293.15 to 323.15) K
rhol	939.04	kg/m3	308.15	Volumetric Properties of Binary Mixtures of N-Ethylformamide with Tetrahydropyran, 2-Pentanone, and Propylacetate from (293.15 to 313.15) K
rhol	934.78	kg/m3	313.15	Volumetric Properties of Binary Mixtures of N-Ethylformamide with Tetrahydropyran, 2-Pentanone, and Propylacetate from (293.15 to 313.15) K
rhol	951.59	kg/m3	Tris(pen	Volumetric Properties of Binary Mixtures of Butyl-1-Methylpyrrolidinium tafluoroethyl)trifluorophosphate with N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, and N,N-Dimethylacetamide from (293.15 to 323.15) K

rhol	947.48	kg/m3	298.15	Volumetric Properties of Binary Mixtures of tyl-1-Methylpyrrolidinium	
			Tris(penta	ifluoroethyl)trifluorophosphate with N-Methylformamide, N-Ethylformamide,	
				N-Dimethylformamide, ,N-Dibutylformamide, and	
			N,	N-Dimethylacetamide from (293.15 to 323.15) K	
rhol	943.29	kg/m3	303.15	Volumetric Properties of Binary Mixtures	
				of tyl-1-Methylpyrrolidinium fluoroethyl)trifluorophosphate with	
			N,	N-Methylformamide, N-Ethylformamide, N-Dimethylformamide, ,N-Dibutylformamide,	
				and N-Dimethylacetamide from (293.15 to 323.15) K	
rhol	939.04	kg/m3	308.15	Volumetric Properties of Binary Mixtures of	
				tyl-1-Methylpyrrolidinium fluoroethyl)trifluorophosphate with	
			N,	N-Methylformamide, N-Ethylformamide, N-Dimethylformamide, ,N-Dibutylformamide,	
				and N-Dimethylacetamide from (293.15 to 323.15) K	
rhol	934.78	kg/m3	313.15	Volumetric Properties of Binary Mixtures	
			1-Bu Tris(penta	of tyl-1-Methylpyrrolidinium fluoroethyl)trifluorophosphate with	
			N,	N-Methylformamide, N-Ethylformamide, N-Dimethylformamide,	
			N	,N-Dibutylformamide, and N-Dimethylacetamide from (293.15 to	
				111 111 1 114 5 1 5 TO	

rhol	943.29	kg/m3	303.15 Volumetric Properties of Binary Mixtures of N-Ethylformamide with Tetrahydropyran, 2-Pentanone, and Propylacetate from (293.15 to 313.15) K
rhol	926.06	kg/m3	323.15 Volumetric Properties of Binary Mixtures of 1-Butyl-1-Methylpyrrolidinium Tris(pentafluoroethyl)trifluorophosphate with N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide, and N,N-Dimethylacetamide from (293.15 to 323.15) K
rhol	951.59	kg/m3	293.15 Volumetric Properties of Binary Mixtures of 1-Butyl-3-Methylimidazolium Tris(pentafluoroethyl)trifluorophosphate with N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide, and N,N-Dimethylacetamide from (293.15 to 323.15) K
rhol	947.48	kg/m3	298.15 Volumetric Properties of Binary Mixtures of 1-Butyl-3-Methylimidazolium Tris(pentafluoroethyl)trifluorophosphate with N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide, and N,N-Dimethylacetamide from (293.15 to 323.15) K

rhol	943.29	kg/m3	303.15 Volumetric Properties of Binary Mixtures
			of 1-Butyl-3-Methylimidazolium Tris(pentafluoroethyl)trifluorophosphate with
			N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide,
			and N,N-Dimethylacetamide from (293.15 to 323.15) K
rhol	939.04	kg/m3	308.15 Volumetric Properties of Binary Mixtures
			of 1-Butyl-3-Methylimidazolium Tris(pentafluoroethyl)trifluorophosphate with
			N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide,
			and N,N-Dimethylacetamide from (293.15 to 323.15) K
rhol	934.78	kg/m3	313.15 Volumetric Properties of Binary Mixtures of
			1-Butyl-3-Methylimidazolium Tris(pentafluoroethyl)trifluorophosphate with
			N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide,
			and N,N-Dimethylacetamide from (293.15 to 323.15) K
rhol	930.45	kg/m3	318.15 Volumetric Properties of Binary Mixtures of
			1-Butyl-3-Methylimidazolium Tris(pentafluoroethyl)trifluorophosphate with
			N-Methylformamide, N-Ethylformamide, N,N-Dimethylformamide, N,N-Dibutylformamide,
			and N,N-Dimethylacetamide from (293.15 to 323.15) K

rhol	926.06	kg/m3	323.15	Volumetric Properties of Binary Mixtures	
				of Butyl-3-Methylimidazolium tafluoroethyl)trifluorophosp	hate
			I	with N-Methylformamide, N-Ethylformamide, I,N-Dimethylformamide, N,N-Dibutylformamide, and	
			יו	N,N-Dimethylacetamide from (293.15 to 323.15) K	
rhol	947.48	kg/m3	298.15	Volumetric Properties of Binary Mixtures of N-Ethylformamide with	
				Tetrahydropyran, 2-Pentanone, and Propylacetate from (293.15 to 313.15) K	
rhol	951.59	kg/m3	293.15	Volumetric Properties of Binary Mixtures of	
				N-Ethylformamide with Tetrahydropyran, 2-Pentanone, and Propylacetate from (293.15 to	
rhol	934.78	kg/m3	313.15	313.15) K Volumetric properties of	
				binary mixtures of N-ethylformamide with tetrahydrofuran, 2-butanone and ethylacetate from (293.15 to 313.15) K	
rhol	939.04	kg/m3	308.15	Volumetric properties of binary mixtures	
				of N-ethylformamide with tetrahydrofuran, 2-butanone and ethylacetate from (293.15 to 313.15) K	

rhol	943.29	kg/m3	303.15	Volumetric properties of binary mixtures of N-ethylformamide with tetrahydrofuran, 2-butanone and ethylacetate from (293.15 to 313.15) K	
rhol	947.48	kg/m3	298.15	Volumetric properties of binary mixtures of N-ethylformamide with tetrahydrofuran, 2-butanone and ethylacetate from (293.15 to 313.15) K	
rhol	951.59	kg/m3	293.15	Volumetric properties of binary mixtures of N-ethylformamide with tetrahydrofuran, 2-butanone and ethylacetate from (293.15 to 313.15) K	

Correlations

Information Value

Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51551e+01
Coeff. B	-4.20439e+03
Coeff. C	-7.21300e+01
Temperature range (K), min.	354.92
Temperature range (K), max.	499.25

Sources

Volumetric Properties of Binary https://www.doi.org/10.1021/je400803f

Mixtures of

http://link.springer.com/article/10.1007/BF02311772 MEGeykanMethynsyrrolidinium

Tris/pentafluoroethyl)trifluorophosphate http://webbook.nist.gov/cgi/cbook.cgi?ID=C627452&Units=SI

NEthylformamideok of Vapor Pris-pimethylformamide, Pris-pimethylformamide, and N.N-Dimethylacetamide from (293.15 to

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

https://en.wikipedia.org/wiki/Joback_method

621p165)nMethod:

http://pubs.acs.org/doi/abs/10.1021/ci990307l

Volumetric Properties of Binary Mixtures of N-Ethylformamide with Yellungtie Byene 21 Fe Afanoaey and https://www.doi.org/10.1021/je300974g https://www.doi.org/10.1021/je5002945

https://www.doi.org/10.1016/j.jct.2012.02.033

Mixtures etate from (293,15 to 313.15) អូមេរប់មន្ទះមានកម្មអូមមន្ទ្រ ការនៅមនុស្ស នៅ បើកនឹងអូមេរប់មនុស្ស នៅក្នុង ក្រុង ប្រសាស មនុស្ស នៅ ប្រសិទ្ធិក្រុង ប្រជាពល នៅ ប្រសិទ្ធិក្រុង ប្រសិទ្ធិកិច្ចិត្ត ប្រសិទ្ធិកិច្ចិតិកិច្ចិត្ត ប្រសិទ្ធិកិច្ចិតិកិច្ចិត្ត ប្រសិទ្ធិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិច្ចិតិកិចិតិកិច្ចិតិកិចិតិកិចិតិកិច្ចិតិកិចិតិកិចិតិកិចិតិកិច្ចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិតិកិចិក

N,N-Dimethylformamide,

I,N-Dimethylformamide, and
N,N-Dimethylacetamide from (293.15 to

323.15) K:

cpg: Ideal gas heat capacity

gf: Standard Gibbs free energy of formation hf: Enthalpy of formation at standard conditions Enthalpy of fusion at standard conditions hfus:

Enthalpy of vaporization at standard conditions hvap:

Log10 of Water solubility in mol/l log10ws: logp: Octanol/Water partition coefficient McGowan's characteristic volume mcvol:

Critical Pressure pc: pvap: Vapor pressure rhol: Liquid Density

rinpol: Non-polar retention indices

tb: Normal Boiling Point Temperature

Critical Temperature tc:

Normal melting (fusion) point tf:

Critical Volume vc:

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