1-Propanol, 3-amino-

Other names:	1,3-Propanolamine
	1-Amino-3-hydroxypropane
	1-Amino-3-propanol
	3-Amino-1-propanol
	3-Aminopropanol
	3-Aminopropanol-(1)
	3-Aminopropyl alcohol
	3-Hydroxy-1-aminopropane
	3-Hydroxy-1-propylamine
	3-Hydroxypropylamine
	3-Propanolamine
	3-aminopropan-1-ol
	NH2(CH2)3OH
	NSC 7766
	Propanolamine
	«beta»-Alaninol
	«gamma»-Aminopropanol
	Â«betaÂ»-Alaninol
	Â«gammaÂ»-Aminopropanol
Inchi:	InChI=1S/C3H9NO/c4-2-1-3-5/h5H,1-4H2
InchiKey:	WUGQZFFCHPXWKQ-UHFFFAOYSA-N
Formula:	C3H9NO
SMILES:	NCCCO
Mol. weight [g/mol]:	75.11
CAS:	156-87-6

Physical Properties

Property code	Value	Unit	Source
affp	953.50 ± 1.60	kJ/mol	NIST Webbook
affp	936.00	kJ/mol	NIST Webbook
affp	945.30	kJ/mol	NIST Webbook
affp	962.50	kJ/mol	NIST Webbook
basg	912.50	kJ/mol	NIST Webbook
basg	917.30	kJ/mol	NIST Webbook
basg	921.30 ± 1.20	kJ/mol	NIST Webbook
basg	903.80	kJ/mol	NIST Webbook
gf	-95.99	kJ/mol	Joback Method

hf	-223.69	kJ/mol	Joback Method
hfus	12.81	kJ/mol	Joback Method
hvap	49.59	kJ/mol	Joback Method
ie	9.00	eV	NIST Webbook
ie	9.77 ± 0.20	eV	NIST Webbook
log10ws	0.22		Crippen Method
logp	-0.672		Crippen Method
mcvol	68.980	ml/mol	McGowan Method
pc	5430.51	kPa	Joback Method
rinpol	773.00		NIST Webbook
rinpol	770.00		NIST Webbook
rinpol	785.00		NIST Webbook
rinpol	826.00		NIST Webbook
rinpol	826.00		NIST Webbook
rinpol	740.00		NIST Webbook
rinpol	773.00		NIST Webbook
rinpol	785.00		NIST Webbook
ripol	1548.00		NIST Webbook
ripol	1548.00		NIST Webbook
ripol	1555.00		NIST Webbook
ripol	1555.00		NIST Webbook
ripol	1577.00		NIST Webbook
ripol	1534.00		NIST Webbook
ripol	1570.00		NIST Webbook
ripol	1555.00		NIST Webbook
tb	461.00	K	NIST Webbook
tb	460.70	K	NIST Webbook
tc	609.84	K	Joback Method
tf	285.55 ± 0.20	K	NIST Webbook
tf	284.70 ± 0.35	K	NIST Webbook
vc	0.252	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	148.69	J/mol×K	462.26	Joback Method
cpg	172.25	J/mol×K	580.32	Joback Method
cpg	177.53	J/mol×K	609.84	Joback Method
cpg	166.73	J/mol×K	550.81	Joback Method
cpg	160.97	J/mol×K	521.29	Joback Method
cpg	154.96	J/mol×K	491.78	Joback Method

cpg	142.17	J/mol×K	432.75	Joback Method
cpl	210.00	J/mol×K	328.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	213.00	J/mol×K	338.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	214.00	J/mol×K	343.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	217.00	J/mol×K	353.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	216.00	J/mol×K	348.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	211.00	J/mol×K	333.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	204.00	J/mol×K	303.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	207.00	J/mol×K	308.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K

cpl	208.00	J/mol×K	313.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	208.00	J/mol×K	318.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
cpl	209.00	J/mol×K	323.15	Molar Heat Capacity of Various Aqueous Alkanolamine Solutions from 303.15 K to 353.15 K
dvisc	0.0392895	Pa×s	293.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0048400	Pa×s	343.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0036300	Pa×s	353.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0031900	Pa×s	358.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0041700	Pa×s	348.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution

dvisc	0.0027300	Pa×s	363.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0025200	Pa×s	368.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0304336	Pa×s	298.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0238679	Pa×s	303.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0190712	Pa×s	308.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory

dvisc	0.0152664	Pa×s	313.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0123545	Pa×s	318.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0102191	Pa×s	323.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0085347	Pa×s	328.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory

dvisc	0.0071234	Pa×s	333.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0060452	Pa×s	338.15	Measurement and modeling the excess molar properties of binary mixtures of {[C6mim][BF4] + 3-amino-1-propanol} and {[C6mim][BF4] + isobutanol}: Application of Prigogine-Flory-Patterson theory
dvisc	0.0404200	Pa×s	293.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0238680	Pa×s	303.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory

dvisc	0.0152660	Pa×s	313.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0102190	Pa×s	323.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0071230	Pa×s	333.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0304300	Pa×s	298.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0238700	Pa×s	303.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution

dvisc	0.0190700	Pa×s	308.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0152700	Pa×s	313.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0123600	Pa×s	318.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0102200	Pa×s	323.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0085400	Pa×s	328.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0022500	Pa×s	373.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0060500	Pa×s	338.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
dvisc	0.0071200	Pa×s	333.15	Viscosity Measurement and Correlation of Unloaded and CO2-Loaded 3-Amino-1-propanol Solution
hfust	16.90	kJ/mol	284.10	NIST Webbook

rhol	968.50	kg/m3	318.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhol	955.38	kg/m3	333.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure
rhol	963.52	kg/m3	323.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure
rhol	971.61	kg/m3	313.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure
rhol	975.50	kg/m3	308.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	987.50	kg/m3	293.15	Volumetric and Viscometric Properties of Alcohol Amines + Ethanol Binary Mixtures
rhol	987.50	kg/m3	293.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K

rhol	983.60	kg/m3	298.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	979.60	kg/m3	303.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	987.65	kg/m3	293.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure
rhol	971.50	kg/m3	313.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	967.50	kg/m3	318.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	963.40	kg/m3	323.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	959.30	kg/m3	328.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K

rhol	955.80	kg/m3	333.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	951.70	kg/m3	338.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	947.60	kg/m3	343.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	943.50	kg/m3	348.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	939.30	kg/m3	353.15	Density Measurements of Unloaded and CO2-Loaded 3-Amino-1-propanol Solutions at Temperatures (293.15 to 353.15) K
rhol	983.59	kg/m3	298.15	Density, Speed of Sound, Viscosity and Surface Tension of 3-Dimethylamino-1-propylamine + Water, 3-Amino-1-propanol + 3-Dimethylamino-1-propanol, and (3-Amino-1-propanol + 3-Dimethylamino-1-propanol) + Water from T = (293.15 to 323.15) K

rhol	964.90	kg/m3	323.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhol	979.45	kg/m3	303.15	Volumetric and Viscometric Properties of Alcohol Amines + Ethanol Binary Mixtures
rhol	971.67	kg/m3	313.15	Volumetric and Viscometric Properties of Alcohol Amines + Ethanol Binary Mixtures
rhol	963.36	kg/m3	323.15	Volumetric and Viscometric Properties of Alcohol Amines + Ethanol Binary Mixtures
rhol	987.80	kg/m3	293.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhol	984.30	kg/m3	298.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model

rhol	980.30	kg/m3	303.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhol	976.20	kg/m3	308.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhol	972.30	kg/m3	313.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhol	979.65	kg/m3	303.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure
speedsl	1727.44	m/s	293.15	Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K

speedsl	1648.51	m/s	318.15	Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K
speedsl	1712.25	m/s	298.15	Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K
speedsl	1664.67	m/s	313.15	Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K

speedsl	1680.79	m/s	308.15	Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K
speedsl	1696.24	m/s	303.15	Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K
speedsl	1632.43	m/s	323.15	Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of Binary Mixtures of 1-Amino-2-propanol or 3-Amino-1-propanol with 2-Amino-2-methyl-1-propanol, Diethanolamine, or Triethanolamine from (293.15 to 323.15) K

srf	0.04	N/m	323.15	Surface Tension of aqueous vinary mixtures of 1-amino-2-propanol and 3-amino-1-propanol, and aqueous ternary mixtures of these amines with diethanolamine, triethanolamine, and 2-amino-2-methyl-1-propanol from (298.15 to 323.15) K
srf	0.04	N/m	318.15	Surface Tension of aqueous vinary mixtures of 1-amino-2-propanol and 3-amino-1-propanol, and aqueous ternary mixtures of these amines with diethanolamine, triethanolamine, and 2-amino-2-methyl-1-propanol from (298.15 to 323.15) K
srf	0.04	N/m	313.15	Surface Tension of aqueous vinary mixtures of 1-amino-2-propanol and 3-amino-1-propanol, and aqueous ternary mixtures of these amines with diethanolamine, triethanolamine, and 2-amino-2-methyl-1-propanol from (298.15 to 323.15) K
srf	0.04	N/m	308.15	Surface Tension of aqueous vinary mixtures of 1-amino-2-propanol and 3-amino-1-propanol, and aqueous ternary mixtures of these amines with diethanolamine, triethanolamine, and 2-amino-2-methyl-1-propanol from (298.15 to 323.15) K

srf	0.04	N/m	298.15	Surface Tension of aqueous vinary mixtures of 1-amino-2-propanol and 3-amino-1-propanol, and aqueous ternary mixtures of these amines with diethanolamine, triethanolamine, and 2-amino-2-methyl-1-propanol from (298.15 to 323.15) K
srf	0.04	N/m	303.15	Surface Tension of aqueous vinary mixtures of 1-amino-2-propanol and 3-amino-1-propanol, and aqueous ternary mixtures of these amines with diethanolamine, triethanolamine, and 2-amino-2-methyl-1-propanol from (298.15 to 323.15) K

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.65620e+01
Coeff. B	-4.48126e+03
Coeff. C	-8.55000e+01
Temperature range (K), min.	360.86
Temperature range (K), max.	483.82

Sources

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

Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model: https://www.doi.org/10.1021/acs.jced.8b01097

Molar excess enthalpy (HEm) for various {alkanolamine (1) + water (2)} systems at T = (298.15, 313.15, and 323.15) K:	https://www.doi.org/10.1016/j.jct.2007.03.010
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure:	https://www.doi.org/10.1021/je3011634
Density, Speed of Sound, Viscosity, and Surface Tension of 3-Dimethylamino-1-propylamine + Water, 3-Amino-1-propanol + Water, and 3-Dimethylamino-1-propanol + Water from (293.15 to 333.15) K:	https://www.doi.org/10.1021/acs.jced.7b00042
Viscosity Measurement and Correlation of Unloaded and CO2-Loaded Aqueous Solutions of 3-Amino-1-propanol and 3-Dimethylamino-1-propanol:	https://www.doi.org/10.1021/acs.jced.7b01035
Density, Speed of Sound, Isentropic Compressibility, and Excess Volume of (3-Amino-1-propanol + Water) and (3-Dimethylamino-1-propanol + Water) Binary Mixtures from (293.15 to 333.15) K:	https://www.doi.org/10.1021/je900739x
Volumetric and Viscometric Properties of Aqueous Solutions of 3-Amino-1-propanol and 3-Amino-2-methyl-1-propanol at Temperatures (293.15 to 333.15) K:	https://www.doi.org/10.1021/je0604232
Measurement and modeling the excess molar properties of binary mixtures of 3-amino-1-propanol and aqueous solutions of diethanolamine, methyldiethanolamine, and 1-amino-2-propanol from (293.15 to 328.15) K:	https://www.doi.org/10.1016/j.tca.2015.02.020
Volumetric and Viscometric Properties of Aqueous Mixtures of 1-Amino-2-propanol and 3-Amino-1-propanol at Temperatures from (293.15 to 333.15) K:	https://www.doi.org/10.1021/acs.jced.5b00412
Prigogine-Flory-Patterson theory:	https://www.doi.org/10.1021/je020048n
Joback Method:	https://www.doi.org/10.1016/j.jct.2011.12.008
Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory:	https://www.doi.org/10.1021/acs.jced.7b00321
	http://webbook.nist.gov/cgi/cbook.cgi?ID=C156876&Units=SI
	https://en.wikipedia.org/wiki/Joback_method
	https://www.doi.org/10.1016/j.jct.2012.02.036

Legend

affp:	Proton affinity
basg:	Gas basicity
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	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
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rhol:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
speedsl:	Speed of sound in fluid
srf:	Surface Tension

tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume