Triethylamine

Other names:	(C2H5)3N
	(Diethylamino)ethane
	1069-58-5 (maleate)
	554-68-7 (chloride)
	Ethanamine, N,N-diethyl-
	N,N,N-triethylamine
	N,N-DIETHYLETHANAMINE
	TEN
	Triaethylamin
	Trietilamina
	UN 1296
Inchi:	InChI=1S/C6H15N/c1-4-7(5-2)6-3/h4-6H2,1-3H3
InchiKey:	ZMANZCXQSJIPKH-UHFFFAOYSA-N
Formula:	C6H15N
SMILES:	CCN(CC)CC
Mol. weight [g/mol]:	101.19
CAS:	121-44-8

Physical Properties

Property code	Value	Unit	Source
af	0.3200		KDB
affp	981.80	kJ/mol	NIST Webbook
basg	951.00	kJ/mol	NIST Webbook
chl	-4377.09 ± 0.54	kJ/mol	NIST Webbook
chl	-4354.30	kJ/mol	NIST Webbook
dm	0.90	debye	KDB
gf	110.40	kJ/mol	KDB
gyrad	3.9300		KDB
hf	-134.10	kJ/mol	NIST Webbook
hf	-99.65	kJ/mol	KDB
hf	-92.90 ± 0.50	kJ/mol	NIST Webbook
hf	-143.10	kJ/mol	NIST Webbook
hfl	-169.00	kJ/mol	NIST Webbook
hfl	-127.80 ± 0.54	kJ/mol	NIST Webbook
hfl	-178.00	kJ/mol	NIST Webbook
hfus	14.32	kJ/mol	Joback Method
hvap	30.99	kJ/mol	Joback Method

ie	7.47 ± 0.04	eV	NIST Webbook
ie	8.03	eV	NIST Webbook
ie	7.50 ± 0.02	eV	NIST Webbook
ie	7.84	eV	NIST Webbook
ie	7.20 ± 0.09	eV	NIST Webbook
ie	7.10 ± 0.10	eV	NIST Webbook
ie	7.30	eV	NIST Webbook
ie	7.53 ± 0.10	eV	NIST Webbook
ie	7.53 ± 0.10	eV	NIST Webbook
ie	8.24 ± 0.04	eV	NIST Webbook
ie	8.08	eV	NIST Webbook
ie	8.19 ± 0.05	eV	NIST Webbook
log10ws	-0.14		Aqueous Solubility Prediction Method
logp	1.348		Crippen Method
mcvol	105.380	ml/mol	McGowan Method
nfpaf	%!d(float64=3)		KDB
nfpah	%!d(float64=2)		KDB
pc	3032.00	kPa	KDB
rhoc	257.02 ± 2.02	kg/m3	NIST Webbook
rinpol	677.00		NIST Webbook
rinpol	672.00		NIST Webbook
rinpol	726.00		NIST Webbook
rinpol	724.00		NIST Webbook
rinpol	676.00		NIST Webbook
rinpol	673.60		NIST Webbook
rinpol	673.60		NIST Webbook
rinpol	727.00		NIST Webbook
rinpol	711.00		NIST Webbook
rinpol	727.00		NIST Webbook
rinpol	684.00		NIST Webbook
rinpol	682.00		NIST Webbook
rinpol	677.00		NIST Webbook
rinpol	684.00		NIST Webbook
rinpol	696.00		NIST Webbook
rinpol	695.00		NIST Webbook
rinpol	680.00		NIST Webbook
rinpol	680.00		NIST Webbook
rinpol	679.00		NIST Webbook
rinpol	677.00		NIST Webbook
rinpol	676.00		NIST Webbook
ripol	812.40		NIST Webbook
ripol	770.00		NIST Webbook
ripol	775.00		NIST Webbook
ripol	763.00		NIST Webbook

ripol	780.00		NIST Webbook
ripol	775.00		NIST Webbook
ripol	727.00		NIST Webbook
ripol	774.00		NIST Webbook
tb	362.00	K	KDB
tc	535.60	K	KDB
tf	158.40	K	KDB
tf	158.45 ± 1.00	K	NIST Webbook
tf	158.00 ± 2.00	K	NIST Webbook
tf	158.23	K	Aqueous Solubility Prediction Method
tf	158.40 ± 0.20	K	NIST Webbook
tf	158.45	K	NIST Webbook
tf	158.45 ± 0.40	K	NIST Webbook
vc	0.389	m3/kmol	KDB
zc	0.2648510		KDB
zra	0.27		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	217.91	J/mol×K	430.36	Joback Method
cpg	207.01	J/mol×K	403.28	Joback Method
cpg	183.89	J/mol×K	349.12	Joback Method
cpg	248.11	J/mol×K	511.60	Joback Method
cpg	238.45	J/mol×K	484.52	Joback Method
cpg	228.39	J/mol×K	457.44	Joback Method
cpg	195.67	J/mol×K	376.20	Joback Method
cpl	216.43	J/mol×K	298.15	NIST Webbook
cpl	177.00	J/mol×K	298.00	NIST Webbook
cpl	218.10	J/mol×K	298.15	NIST Webbook
dvisc	0.0003855	Pa×s	291.15	Dynamic Viscosity Study of Binary Mixtures Triethylamine + Water at Temperatures Ranging from (283.15 to 291.35) K

dvisc	0.0003900	Pa×s	290.15	Dynamic Viscosity Study of Binary Mixtures Triethylamine + Water at Temperatures Ranging from (283.15 to 291.35) K
dvisc	0.0003989	Pa×s	288.15	Dynamic Viscosity Study of Binary Mixtures Triethylamine + Water at Temperatures Ranging from (283.15 to 291.35) K
dvisc	0.0004085	Pa×s	286.15	Dynamic Viscosity Study of Binary Mixtures Triethylamine + Water at Temperatures Ranging from (283.15 to 291.35) K
dvisc	0.0004229	Pa×s	283.15	Dynamic Viscosity Study of Binary Mixtures Triethylamine + Water at Temperatures Ranging from (283.15 to 291.35) K
dvisc	0.0002980	Pa×s	323.15	Thermodynamic study of Binary Mixtures of Tricyclo [5.2.1.0(2.6)] Decane with N-Methylpiperazine or Triethylamine at T = (298.15 to 323.15) K
dvisc	0.0003310	Pa×s	313.15	Thermodynamic study of Binary Mixtures of Tricyclo [5.2.1.0(2.6)] Decane with N-Methylpiperazine or Triethylamine at T = (298.15 to 323.15) K

dvisc	0.0003340	Pa×s	308.15	Thermodynamic study of Binary Mixtures of Tricyclo [5.2.1.0(2.6)] Decane with N-Methylpiperazine or Triethylamine at T = (298.15 to 323.15) K
dvisc	0.0003400	Pa×s	303.15	Thermodynamic study of Binary Mixtures of Tricyclo [5.2.1.0(2.6)] Decane with N-Methylpiperazine or Triethylamine at T = (298.15 to 323.15) K
dvisc	0.0003847	Pa×s	291.35	Dynamic Viscosity Study of Binary Mixtures Triethylamine + Water at Temperatures Ranging from (283.15 to 291.35) K
dvisc	0.0003660	Pa×s	298.15	Thermodynamic study of Binary Mixtures of Tricyclo [5.2.1.0(2.6)] Decane with N-Methylpiperazine or Triethylamine at T = (298.15 to 323.15) K
hvapt	35.20 ± 0.90	kJ/mol	275.00	NIST Webbook
hvapt	33.90	kJ/mol	336.00	NIST Webbook
hvapt	34.10	kJ/mol	320.00	NIST Webbook
hvapt	34.60	kJ/mol	311.00	NIST Webbook
hvapt	33.90 ± 0.10	kJ/mol	313.00	NIST Webbook
hvapt	31.01	kJ/mol	362.10	NIST Webbook
hvapt	31.38	kJ/mol	362.40	KDB
hvapt	32.20 ± 0.10	kJ/mol	343.00	NIST Webbook
hvapt	31.30 ± 0.20	kJ/mol	358.00	NIST Webbook
hvapt	34.80	kJ/mol	332.00	NIST Webbook
hvapt	33.30	kJ/mol	340.50	NIST Webbook
hvapt	33.00	kJ/mol	311.00	NIST Webbook
hvapt	33.18	kJ/mol	363.30	NIST Webbook
hvapt	33.00 ± 0.20	kJ/mol	328.00	NIST Webbook
hvapt	33.40 ± 0.20	kJ/mol	313.00	NIST Webbook

pvap	74.94	kPa	352.77	Experimental Vapor Pressures of 2-Phenylethylamine, Benzylamine, Triethylamine, and cis-2,6-Dimethylpiperidine in the Range between 0.2 Pa and 75 kPa
pvap	2.46	kPa	273.04	Experimental Vapor Pressures of 2-Phenylethylamine, Benzylamine, Triethylamine, and cis-2,6-Dimethylpiperidine in the Range between 0.2 Pa and 75 kPa
pvap	7.01	kPa	292.87	Experimental Vapor Pressures of 2-Phenylethylamine, Benzylamine, Triethylamine, and cis-2,6-Dimethylpiperidine in the Range between 0.2 Pa and 75 kPa
pvap	17.43	kPa	312.82	Experimental Vapor Pressures of 2-Phenylethylamine, Benzylamine, Triethylamine, and cis-2,6-Dimethylpiperidine in the Range between 0.2 Pa and 75 kPa
pvap	38.05	kPa	332.78	Experimental Vapor Pressures of 2-Phenylethylamine, Benzylamine, Triethylamine, and cis-2,6-Dimethylpiperidine in the Range between 0.2 Pa and 75 kPa

rfi	1.39500	308.15	Densities and Refractive Indices of Binary Mixtures of Benzene with Triethylamine and Tributylamine at Different Temperatures
rfi	1.39290	308.15	Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of Tri-n-butylamine + Triethylamine, + Tetrahydrofuran, + Tetradecane, + Tetrachloroethylene, + Pyridine, or + Trichloroethylene at (298.15, 303.15, and 308.15) K
rfi	1.39580	303.15	Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of Tri-n-butylamine + Triethylamine, + Tetrahydrofuran, + Tetradecane, + Tetrachloroethylene, + Pyridine, or + Trichloroethylene at (298.15, 303.15, and 308.15) K
rfi	1.39260	308.15	Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of 1,4-Dioxane + Ethanediol, + Hexane, + Tributylamine, or + Triethylamine at (298.15, 303.15, and 308.15) K

rfi	1.39550	303.15	Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of 1,4-Dioxane + Ethanediol, + Hexane, + Tributylamine, or + Triethylamine at (298.15, 303.15, and 308.15) K	
rfi	1.39830	298.15	Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of 1,4-Dioxane + Ethanediol, + Hexane, + Tributylamine, or + Triethylamine at (298.15, 303.15, and 308.15) K	
rfi	1.39660	293.15	Measurement and correlation of the mutual solubility of diisopropylamine + water and triethylamine + water systems at high pressure	
rfi	1.40110	298.15	Densities and Refractive Indices of Binary Mixtures of Benzene with Triethylamine and Tributylamine at Different Temperatures	
rfi	1.39830	303.15	Densities and Refractive Indices of Binary Mixtures of Benzene with Triethylamine and Tributylamine at Different Temperatures	

rfi	1.38980		318.15	Densities and Refractive Indices of Binary Mixtures of Benzene with Triethylamine and Tributylamine at Different Temperatures
rfi	1.39920		298.15	Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of Tri-n-butylamine + Triethylamine, + Tetrahydrofuran, + Tetradecane, + Tetrachloroethylene, + Pyridine, or + Trichloroethylene at (298.15, 303.15, and 308.15) K
rfi	1.39280		313.15	Densities and Refractive Indices of Binary Mixtures of Benzene with Triethylamine and Tributylamine at Different Temperatures
rhol	727.40	kg/m3	293.15	Volumetric behaviour of binary mixtures of (trichloromethane + amines) at temperatures between T = (288.15 and 303.15) K at p = 0.1 MPa
rhol	732.03	kg/m3	288.15	Volumetric behaviour of binary mixtures of (trichloromethane + amines) at temperatures between T = (288.15 and 303.15) K at p = 0.1 MPa

rhol	722.81	kg/m3	298.15	Thermodynamics of ketone + amine mixtures. Part X. Excess molarenthalpies at 298.15 K for N,N,N-triethylamine + 2-alkanone systems.Characterization of tertiary amine + 2-alkanone, and ofamino-ketone + n-alkane mixtures in terms of DISQUAC
rhol	723.01	kg/m3	298.15	Partial molar volume of tertiary amines in methanol at T = 298.15 K. Solvation, shape and specific interactions
rhol	728.00	kg/m3	293.00	KDB
rhol	722.81	kg/m3	298.15	Thermodynamics of (ketone + amine) mixtures. Part XI. Excess molar enthalpies at T = 298.15 K for the (1-propanol + N,N,N-triethylamine + 2-butanone) system
rhol	718.44	kg/m3	303.15	Studies of viscosities of dilute solutions of alkylamines in non-electrolyte solvents III. Alkylamines in butanols 303.15K
rhol	709.05	kg/m3	313.15	Studies of partial molar volumes of alkylamine in non-electrolyte solvents I. Alkylamines in hydrocarbons at 303.15 and 313.15K
rhol	722.56	kg/m3	298.15	Excess molar volumes and excess molar enthalpies of binary and ternary mixtures of (ethanol or 1-butanol), triethylamine and n-hexane

rhol	718.44	kg/m3	303.15	Studies of partial molar volumes of alkylamine in non-electrolyte solvents I. Alkylamines in hydrocarbons at 303.15 and 313.15K
rhol	718.44	kg/m3	303.15	Studies of viscosities of dilute solutions of alkylamine in non-electrolyte solvents. II. Haloalkanes and other polar solvents
rhol	727.70	kg/m3	293.15	Volumetric properties of binary mixtures of (acetonitrile + amines) at several temperatures with application of the ERAS model
rhol	718.36	kg/m3	303.15	Volumetric properties of binary mixtures of (acetonitrile + amines) at several temperatures with application of the ERAS model
rhol	713.65	kg/m3	308.15	Volumetric properties of binary mixtures of (acetonitrile + amines) at several temperatures with application of the ERAS model
rhol	722.77	kg/m3	298.15	Volumetric behaviour of binary mixtures of (trichloromethane + amines) at temperatures between T = (288.15 and 303.15) K at p = 0.1 MPa

rhol	718.12	kg/m3	303.15	Volumetric behaviour of binary mixtures of (trichloromethane + amines) at temperatures between T = (288.15 and 303.15) K at p = 0.1 MPa	
rhol	723.02	kg/m3	298.15	Volumetric properties of binary mixtures of (acetonitrile + amines) at several temperatures with application of the ERAS model	
speedsl	1090.70	m/s	303.15	Thermodynamics of ketone + amine mixtures Part IV. Volumetric and speed of sound data at (293.15; 298.15 and 303.15 K) for 2-butanone +dipropylamine, +dibutylamine or +triethylamine systems	
speedsl	1111.10	m/s	298.15	Thermodynamics of ketone + amine mixtures Part IV. Volumetric and speed of sound data at (293.15; 298.15 and 303.15 K) for 2-butanone +dipropylamine, +dibutylamine or +triethylamine systems	
speedsl	1132.77	m/s	293.15	Thermodynamics of ketone + amine mixtures Part IV. Volumetric and speed of sound data at (293.15; 298.15 and 303.15 K) for 2-butanone +dipropylamine, +dibutylamine or +triethylamine systems	

speedsl	1090.65	m/s	303.15	Thermodynamics of (ketone + amine) mixtures. Part VI. Volumetric and speed of sound data at (293.15, 298.15, and 303.15) K for (2-heptanone + dipropylamine, +dibutylamine, or +triethylamine) systems	
speedsl	1110.90	m/s	298.15	Thermodynamics of (ketone + amine) mixtures. Part VI. Volumetric and speed of sound data at (293.15, 298.15, and 303.15) K for (2-heptanone + dipropylamine, +dibutylamine, or +triethylamine) systems	
speedsl	1132.47	m/s	293.15	Thermodynamics of (ketone + amine) mixtures. Part VI. Volumetric and speed of sound data at (293.15, 298.15, and 303.15) K for (2-heptanone + dipropylamine, +dibutylamine, or +triethylamine) systems	
srf	0.02	N/m	293.20	KDB	

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.29590e+01
Coeff. B	-2.11704e+03
Coeff. C	-1.08476e+02
Temperature range (K), min.	275.55
Temperature range (K), max.	385.31

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	6.51266e+01
Coeff. B	-6.12731e+03
Coeff. C	-7.51862e+00
Coeff. D	5.20704e-06
Temperature range (K), min.	158.45
Temperature range (K), max.	535.15

Datasets

Viscosity, Pa*s

Amount density, mol/m3 - Gas	Temperature, K - Gas	Viscosity, Pa*s - Gas
2.2	299.67	0.0000065
2.2	299.85	0.0000065
2.2	313.96	0.0000068
2.2	326.63	0.0000070
2.2	339.05	0.0000073
2.2	352.50	0.0000076
2.2	366.60	0.0000078
2.2	381.14	0.0000081
2.2	394.56	0.0000084
2.2	409.20	0.0000087
2.2	422.79	0.0000090
2.2	437.42	0.0000093
2.2	451.72	0.0000096
2.2	466.58	0.0000099
2.2	480.36	0.0000102
2.2	498.45	0.0000106
3.13	300.02	0.0000065
3.13	303.12	0.0000065
3.13	316.33	0.0000068
3.13	324.26	0.0000070
3.13	338.31	0.0000073
3.13	352.91	0.0000076

3.13	366.49	0.0000078
3.13	380.67	0.0000081
3.13	394.95	0.0000084
3.13	412.99	0.0000088
3.13	423.41	0.0000090
3.13	437.51	0.0000093
3.13	451.74	0.0000096
3.13	469.98	0.0000100
3.13	480.86	0.0000102
3.13	498.38	0.0000106
4.2	296.98	0.0000064
4.2	297.97	0.0000064
4.2	310.02	0.0000067
4.2	324.95	0.0000070
4.2	338.63	0.0000072
4.2	353.30	0.0000076
4.2	365.86	0.0000078
4.2	385.41	0.0000082
4.2	394.25	0.0000084
4.2	409.73	0.0000087
4.2	423.93	0.0000090
4.2	436.97	0.0000093
4.2	451.76	0.0000096
4.2	466.71	0.0000099
4.2	481.32	0.0000102
4.2	495.31	0.0000105
4.99	297.98	0.0000064
4.99	298.33	0.0000064
4.99	314.61	0.0000067
4.99	325.84	0.0000070
4.99	338.25	0.0000072
4.99	352.46	0.0000075
4.99	367.25	0.0000078
4.99	380.54	0.0000081
4.99	394.51	0.0000084
4.99	409.32	0.0000087
4.99	423.25	0.0000090
4.99	437.62	0.0000093
4.99	451.28	0.0000096
4.99	466.45	0.0000099
4.99	480.43	0.0000102
4.99	495.29	0.0000105
6.31	297.59	0.0000064
6.31	299.36	0.0000064

6.31	310.29	0.0000067
6.31	324.90	0.0000069
6.31	337.84	0.0000072
6.31	352.41	0.0000075
6.31	366.77	0.0000078
6.31	381.83	0.0000081
6.31	394.49	0.0000084
6.31	408.97	0.0000087
6.31	423.92	0.0000090
6.31	437.11	0.0000092
6.31	451.66	0.0000096
6.31	465.92	0.0000098
6.31	481.09	0.0000102
6.31	495.17	0.0000104
7.52	299.24	0.0000064
7.52	326.04	0.0000070
7.52	338.12	0.0000072
7.52	352.32	0.0000075
7.52	366.72	0.0000078
7.52	385.75	0.0000082
7.52	394.86	0.0000084
7.52	409.67	0.0000087
7.52	423.03	0.0000090
7.52	437.87	0.0000093
7.52	451.93	0.0000096
7.52	471.39	0.0000100
7.52	480.70	0.0000101
7.52	495.84	0.0000105
8.75	297.87	0.0000064
8.75	300.11	0.0000065
8.75	311.78	0.0000067
8.75	324.05	0.0000069
8.75	338.92	0.0000072
8.75	352.34	0.0000075
8.75	366.42	0.0000078
8.75	381.06	0.0000081
8.75	395.11	0.0000084
8.75	408.35	0.0000086
8.75	422.67	0.0000089
8.75	437.76	0.0000093
8.75	451.45	0.0000095
8.75	466.63	0.0000099
8.75	480.12	0.0000101
8.75	496.21	0.0000105

Temperature, K	Pressure, kPa	Viscosity, Pa*s
303.15	101.33	0.0003296

Reference https://www.doi.org/10.1016/j.tca.2009.07.008

Sources

Thermodynamics of ketone + amine mixtures Part IV. Volumetric and speed of sound data at (293.15; 298.15 and 303.15 K) for 2-butanone + dipropylamine, +dibutylamine or +triethylamine systems:	https://www.doi.org/10.1016/j.tca.2010.09.004
Thermodynamic study of Binary Mixtures of Tricyclo[5.2.1.0(2.6)] ...	https://www.doi.org/10.1016/j.tca.2012.06.011
Dynamic Viscosity Study of Binary Mixtures Triethylamine + Water at Temperatures Ranging from (283.15 to 291.35) K:	https://www.doi.org/10.1021/je800982n
	https://www.cheric.org/files/research/kdb/mol/mol1272.mol
Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of Tri-n-butylamine + ...	https://www.doi.org/10.1021/je030147g
Density, Viscosity, Refractive Index, and Speed of Sound in the Binary Mixtures of ... + Tetrachloroethylene, ...	https://www.doi.org/10.1021/je030107c
Densities and Refractive Indices of Binary Mixtures of Benzene with ... at Different Temperatures:	https://www.doi.org/10.1007/s10765-006-0095-5
Thermodynamics of ... Excess molar enthalpies at T = 298.15 K for the ... 2-butanone system:	https://www.doi.org/10.1016/j.jct.2013.09.026
Electrical conductivity investigation of diluted potassium chloride solutions in the critical triethylamine-water near its consolute point:	https://www.doi.org/10.1016/j.fluid.2011.03.031
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C121448&Units=SI
The viscosity of triethylamine vapor at low densities and in the saturated vapor phase:	https://www.doi.org/10.1016/j.fluid.2010.02.037
Studies of viscosities of dilute solutions of alkylamine in non-electrolyte solvents. II. Haloalkanes and other polar solvents:	https://www.doi.org/10.1016/j.tca.2004.08.013
Activity coefficients at infinite dilution of organic solutes in methylphosphonate based ionic liquids using gas-liquid chromatography:	https://www.doi.org/10.1016/j.jct.2015.02.023
Group Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Thermodynamic properties of triethylamine +water liquid mixture from shear viscosity measurements:	https://www.doi.org/10.1016/j.fluid.2009.01.004
Studies of viscosities of dilute solutions of alkylamines in non-electrolyte solvents III. Alkylamines in alkanols at 303.15K:	https://www.doi.org/10.1016/j.tca.2009.02.005
Activity Coefficients at Infinite Dilution of Organic Compounds in 1-Butyl-3-methylimidazolium Tetrafluoroborate Using Inverse Gas Chromatography:	https://www.doi.org/10.1021/je800658v
Study of Ether-, Alcohol-, or Cyano-Functionalized Ionic Liquids Using Inverse Gas Chromatography:	https://www.doi.org/10.1021/je900838a
Experimental Vapor Pressures of 2-Phenylethylamine, Benzylamine, Triethylamine, and cis-2,6-Dimethylpiperidine in the Range between 0.2 Pa and 75 kPa:	https://www.doi.org/10.1021/je800603z
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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
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
gyrad:	Radius of Gyration
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
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
pc:	Critical Pressure
pvap:	Vapor pressure

rfi:	Refractive Index
rhoc:	Critical density
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
zc:	Critical Compressibility
zra:	Rackett Parameter