

Butane, 2,2-dimethyl-

Other names:	(CH3)3CCH2CH3 2,2-Dimethylbutane NEOHEXANE UN 1208
Inchi:	InChI=1S/C6H14/c1-5-6(2,3)4/h5H2,1-4H3
InchiKey:	HNRMPXKDFBEGFZ-UHFFFAOYSA-N
Formula:	C6H14
SMILES:	CCC(C)(C)C
Mol. weight [g/mol]:	86.18
CAS:	75-83-2

Physical Properties

Property code	Value	Unit	Source
af	0.2320		KDB
ap	354.350	K	KDB
chl	-4148.50 ± 0.88	kJ/mol	NIST Webbook
gf	-9.63	kJ/mol	KDB
hcg	4148.52	kJ/mol	KDB
hcn	3840.410	kJ/mol	KDB
hf	-185.70	kJ/mol	KDB
hf	-185.60 ± 0.96	kJ/mol	NIST Webbook
hfl	-213.40 ± 0.96	kJ/mol	NIST Webbook
hfus	3.88	kJ/mol	Joback Method
hvap	27.93	kJ/mol	NIST Webbook
hvap	27.68	kJ/mol	NIST Webbook
hvap	27.70	kJ/mol	NIST Webbook
ie	9.79	eV	NIST Webbook
ie	10.06	eV	NIST Webbook
ie	10.07	eV	NIST Webbook
log10ws	-3.55		Aqueous Solubility Prediction Method
log10ws	-3.55		Estimated Solubility Method
logp	2.442		Crippen Method
mcvol	95.400	ml/mol	McGowan Method
nfpaf	%!d(float64=3)		KDB
nfpah	%!d(float64=1)		KDB
pc	3102.00 ± 3.00	kPa	NIST Webbook

pc	3102.36 ± 5.00	kPa	NIST Webbook
pc	3100.00 ± 20.00	kPa	NIST Webbook
pc	3100.00	kPa	KDB
pc	3107.64 ± 10.13	kPa	NIST Webbook
rhoc	240.43 ± 1.72	kg/m3	NIST Webbook
rhoc	241.29 ± 1.72	kg/m3	NIST Webbook
rinpol	538.00		NIST Webbook
rinpol	535.50		NIST Webbook
rinpol	536.70		NIST Webbook
rinpol	537.10		NIST Webbook
rinpol	537.70		NIST Webbook
rinpol	534.00		NIST Webbook
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rinpol	541.30		NIST Webbook
rinpol	542.20		NIST Webbook
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rinpol	530.00		NIST Webbook
rinpol	536.80		NIST Webbook

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rinpol	535.00	NIST Webbook
rinpol	538.00	NIST Webbook
rinpol	538.00	NIST Webbook
rinpol	541.00	NIST Webbook
rinpol	534.00	NIST Webbook
rinpol	540.90	NIST Webbook
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rinpol	535.00	NIST Webbook
rinpol	547.90	NIST Webbook
rinpol	543.80	NIST Webbook

rinpol	535.30		NIST Webbook
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rinpol	533.00		NIST Webbook
rinpol	538.00		NIST Webbook
rinpol	540.80		NIST Webbook
rinpol	537.40		NIST Webbook
rinpol	535.60		NIST Webbook
rinpol	532.00		NIST Webbook
rinpol	542.00		NIST Webbook
rinpol	533.90		NIST Webbook
ripol	500.00		NIST Webbook
sg	358.65 ± 0.84	J/mol×K	NIST Webbook
sl	272.50	J/mol×K	NIST Webbook
sl	272.00	J/mol×K	NIST Webbook
sl	269.40	J/mol×K	NIST Webbook
tb	323.70 ± 1.00	K	NIST Webbook
tb	322.00 ± 1.00	K	NIST Webbook
tb	322.90 ± 0.50	K	NIST Webbook
tb	325.65 ± 0.50	K	NIST Webbook
tb	325.65 ± 2.00	K	NIST Webbook
tb	322.96 ± 0.10	K	NIST Webbook
tb	322.90 ± 0.20	K	NIST Webbook
tb	322.15 ± 1.50	K	NIST Webbook
tb	322.85 ± 0.20	K	NIST Webbook
tb	322.75 ± 0.50	K	NIST Webbook
tb	322.95 ± 0.20	K	NIST Webbook
tb	322.85 ± 0.20	K	NIST Webbook
tb	322.85 ± 0.50	K	NIST Webbook
tb	322.87 ± 0.10	K	NIST Webbook
tb	322.95 ± 0.20	K	NIST Webbook
tb	322.88 ± 0.05	K	NIST Webbook
tb	322.85 ± 0.60	K	NIST Webbook
tb	322.75 ± 0.30	K	NIST Webbook
tb	322.85 ± 0.50	K	NIST Webbook
tb	322.75 ± 0.30	K	NIST Webbook
tb	322.85 ± 0.50	K	NIST Webbook
tb	322.95 ± 0.20	K	NIST Webbook
tb	322.85 ± 0.40	K	NIST Webbook
tb	353.25 ± 0.30	K	NIST Webbook
tb	322.80 ± 0.15	K	NIST Webbook
tb	322.85 ± 0.50	K	NIST Webbook
tb	322.86 ± 0.10	K	NIST Webbook
tb	323.00 ± 0.10	K	NIST Webbook

tb	322.85 ± 0.70	K	NIST Webbook
tb	322.85 ± 0.60	K	NIST Webbook
tb	323.00 ± 0.10	K	NIST Webbook
tb	322.80 ± 0.30	K	NIST Webbook
tb	322.85 ± 0.20	K	NIST Webbook
tb	320.65 ± 8.00	K	NIST Webbook
tb	322.89 ± 0.01	K	NIST Webbook
tb	322.88 ± 0.05	K	NIST Webbook
tb	322.88	K	KDB
tb	322.85 ± 1.00	K	NIST Webbook
tb	322.88 ± 0.10	K	NIST Webbook
tb	322.89 ± 0.15	K	NIST Webbook
tb	322.40 ± 0.20	K	NIST Webbook
tb	322.85 ± 0.30	K	NIST Webbook
tb	322.80 ± 0.30	K	NIST Webbook
tb	322.85 ± 0.30	K	NIST Webbook
tb	322.90 ± 0.30	K	NIST Webbook
tb	322.98 ± 0.10	K	NIST Webbook
tb	322.80 ± 1.00	K	NIST Webbook
tb	322.90 ± 1.00	K	NIST Webbook
tb	322.85 ± 0.30	K	NIST Webbook
tb	322.80 ± 0.50	K	NIST Webbook
tb	322.90	K	NIST Webbook
tb	322.90	K	NIST Webbook
tb	322.90 ± 0.05	K	NIST Webbook
tb	322.85 ± 0.10	K	NIST Webbook
tb	322.85 ± 0.50	K	NIST Webbook
tc	489.00	K	KDB
tc	488.73 ± 0.20	K	NIST Webbook
tc	488.70 ± 0.30	K	NIST Webbook
tc	489.24 ± 0.20	K	NIST Webbook
tc	489.25 ± 0.10	K	NIST Webbook
tc	488.70	K	NIST Webbook
tc	489.00 ± 0.30	K	NIST Webbook
tc	489.35 ± 0.50	K	NIST Webbook
tc	489.40	K	The Critical Temperatures of a Number of (i) (Chloroalkane (C3 C4) + Hydrocarbon (C6 C7)) Binary Mixtures and (ii) (Aromatic Halocarbon (Chlorobenzene, Fluorobenzene, 1,2-Dichlorobenzene, or 1,3-Dichlorobenzene) + Alkane (C8)) Binary Mixtures
tf	173.18 ± 0.15	K	NIST Webbook

tf	173.24 ± 0.04	K	NIST Webbook
tf	174.29 ± 0.10	K	NIST Webbook
tf	173.09 ± 0.05	K	NIST Webbook
tf	236.66 ± 0.15	K	NIST Webbook
tf	260.51	K	NIST Webbook
tf	173.15 ± 0.01	K	NIST Webbook
tf	174.00	K	KDB
tf	173.40	K	Aqueous Solubility Prediction Method
tf	172.85 ± 0.70	K	NIST Webbook
tf	172.65 ± 0.20	K	NIST Webbook
tf	173.65 ± 0.15	K	NIST Webbook
tf	163.85 ± 6.00	K	NIST Webbook
tf	163.14 ± 0.08	K	NIST Webbook
tf	173.26 ± 0.06	K	NIST Webbook
tf	173.28 ± 0.04	K	NIST Webbook
tf	173.18 ± 0.07	K	NIST Webbook
tf	173.18 ± 0.15	K	NIST Webbook
tf	173.42 ± 0.06	K	NIST Webbook
tf	175.00 ± 0.30	K	NIST Webbook
tf	174.95 ± 0.50	K	NIST Webbook
tf	172.13 ± 0.15	K	NIST Webbook
tf	173.39 ± 0.25	K	NIST Webbook
tf	172.65 ± 0.40	K	NIST Webbook
tf	174.95 ± 1.00	K	NIST Webbook
tf	171.15 ± 2.00	K	NIST Webbook
tf	173.09 ± 0.05	K	NIST Webbook
tf	173.42 ± 0.06	K	NIST Webbook
tf	172.90 ± 0.60	K	NIST Webbook
tf	170.74 ± 0.10	K	NIST Webbook
tt	174.28 ± 0.06	K	NIST Webbook
tt	173.27 ± 0.40	K	NIST Webbook
tt	173.27 ± 0.40	K	NIST Webbook
tt	172.10 ± 0.20	K	NIST Webbook
tt	174.50 ± 0.25	K	NIST Webbook
tt	174.16 ± 0.07	K	NIST Webbook
vc	0.358	m3/kmol	KDB
vc	0.358	m3/kmol	NIST Webbook
vc	0.358 ± 0.001	m3/kmol	NIST Webbook
zc	0.2729600		KDB
zra	0.27		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	188.07 ± 0.38	J/mol×K	412.40	NIST Webbook
cpg	202.21 ± 0.40	J/mol×K	449.40	NIST Webbook
cpg	164.22 ± 0.33	J/mol×K	353.20	NIST Webbook
cpg	159.41 ± 0.32	J/mol×K	341.55	NIST Webbook
cpg	173.64 ± 0.35	J/mol×K	376.05	NIST Webbook
cpl	189.14	J/mol×K	298.15	NIST Webbook
cpl	189.14	J/mol×K	298.15	NIST Webbook
cpl	189.44	J/mol×K	298.15	NIST Webbook
cpl	191.88	J/mol×K	298.15	NIST Webbook
cpl	191.88	J/mol×K	298.15	NIST Webbook
cpl	183.18	J/mol×K	298.10	NIST Webbook
cpl	189.67	J/mol×K	298.15	NIST Webbook
cpl	188.74	J/mol×K	298.15	NIST Webbook
cpl	191.50	J/mol×K	300.00	NIST Webbook
cpl	186.90	J/mol×K	290.00	NIST Webbook
dvisc	0.0002839	Pa×s	333.45	Joback Method
dvisc	0.0003902	Pa×s	304.51	Joback Method
dvisc	0.0036939	Pa×s	188.74	Joback Method
dvisc	0.0016831	Pa×s	217.68	Joback Method
dvisc	0.0107782	Pa×s	159.80	Joback Method
dvisc	0.0009222	Pa×s	246.62	Joback Method
dvisc	0.0005734	Pa×s	275.57	Joback Method
hfust	0.58	kJ/mol	174.30	NIST Webbook
hfust	5.40	kJ/mol	126.80	NIST Webbook
hfust	0.28	kJ/mol	140.80	NIST Webbook
hfust	0.58	kJ/mol	174.30	NIST Webbook
hvapt	26.30	kJ/mol	322.90	KDB
hvapt	26.31	kJ/mol	322.90	NIST Webbook
hvapt	28.70	kJ/mol	295.50	NIST Webbook
hvapt	27.80 ± 0.10	kJ/mol	296.00	NIST Webbook
hvapt	26.30 ± 0.10	kJ/mol	323.00	NIST Webbook
hvapt	28.30	kJ/mol	305.50	NIST Webbook
hvapt	29.20	kJ/mol	250.00	NIST Webbook
kvisc	0.0000006	m ² /s	283.15	Experimental and Predicted Kinematic Viscosities for Alkane + Chloroalkane Mixtures

kvisc	0.0000005	m2/s	313.15	Experimental and Predicted Kinematic Viscosities for Alkane + Chloroalkane Mixtures	
kvisc	0.0000005	m2/s	298.15	Experimental and Predicted Kinematic Viscosities for Alkane + Chloroalkane Mixtures	
rfi	1.36608		298.15	Liquid liquid equilibria of lactam containing binary systems	
rfi	1.36595		298.15	KDB	
rhof	644.59	kg/m3	298.15	Excess molar enthalpies of ternary mixtures (dibutyl ether or dipropyl ether + 2,2-dimethylbutane + 2,3-dimethylbutane) at the temperature 298.15 K	
rhof	644.92	kg/m3	298.15	Excess enthalpies of binary mixtures of 1-hexene with some branched alkanes at the temperature 298.15 K	
rhof	649.00	kg/m3	293.00	KDB	
sfust	42.57	J/mol×K	126.80	NIST Webbook	
sfust	3.31	J/mol×K	174.30	NIST Webbook	
sfust	2.02	J/mol×K	140.80	NIST Webbook	
sfst	0.02	N/m	243.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K	
sfst	0.02	N/m	278.08	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K	
sfst	0.02	N/m	288.17	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K	

srf	0.02	N/m	293.12	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	298.10	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	303.17	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	308.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	313.12	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	318.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	323.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	328.12	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	333.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	338.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	343.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	348.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K

srf	0.01	N/m	353.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	358.12	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	363.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	368.12	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.01	N/m	373.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	273.10	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	268.10	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	263.13	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	258.12	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	253.12	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	248.11	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	238.10	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K

srf	0.02	N/m	233.09	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	298.20	KDB
srf	0.01	N/m	378.23	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
srf	0.02	N/m	283.09	Surface Tension of 2,2-Dimethylbutane from (233 to 378) K
tcondl	0.11	W/m×K	257.48	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	257.84	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.11	W/m×K	258.30	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.09	W/m×K	320.28	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.10	W/m×K	271.84	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)

tcondl	0.10	W/m×K	272.32	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.10	W/m×K	279.86	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.10	W/m×K	280.24	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.10	W/m×K	280.73	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.09	W/m×K	297.98	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.09	W/m×K	298.42	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.09	W/m×K	298.91	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)

tcondl	0.09	W/m×K	319.35	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.09	W/m×K	319.75	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)
tcondl	0.10	W/m×K	271.49	Thermal Conductivity and Thermal Diffusivity of Sixteen Isomers of Alkanes: C _n H _{2n+2} (n = 6 to 8)

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.39639e+01
Coeff. B	-2.69291e+03
Coeff. C	-3.47320e+01
Temperature range (K), min.	231.63
Temperature range (K), max.	345.96

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	7.41375e+01
Coeff. B	-5.64285e+03
Coeff. C	-9.18104e+00
Coeff. D	9.58793e-06
Temperature range (K), min.	174.28
Temperature range (K), max.	489.00

Datasets

Mass density, kg/m3

Pressure, kPa - Liquid	Temperature, K - Liquid	Mass density, kg/m3 - Liquid
100.00	283.15	658.57
100.00	288.15	653.96
100.00	293.15	649.25
100.00	298.15	644.46
100.00	303.15	639.75
100.00	308.15	634.86
100.00	313.15	630.04
100.00	318.15	625.06
100.00	323.15	620.03
2000.00	283.15	660.76
2000.00	288.15	656.25
2000.00	293.15	651.6
2000.00	298.15	646.95
2000.00	303.15	642.26
2000.00	308.15	637.48
2000.00	313.15	632.76
2000.00	318.15	627.98
2000.00	323.15	623.17
2000.00	328.15	618.2
5000.00	283.15	664.07
5000.00	288.15	659.62
5000.00	293.15	655.12
5000.00	298.15	650.7
5000.00	303.15	646.07
5000.00	308.15	641.54
5000.00	313.15	637.06
5000.00	318.15	632.33
5000.00	323.15	627.74
5000.00	328.15	623.02
7000.00	283.15	666.19
7000.00	288.15	661.74
7000.00	293.15	657.45
7000.00	298.15	653.04
7000.00	303.15	648.58
7000.00	308.15	644.04

7000.00	313.15	639.66
7000.00	318.15	635.14
7000.00	323.15	630.61
7000.00	328.15	626.02
10000.00	283.15	669.19
10000.00	288.15	664.88
10000.00	293.15	660.66
10000.00	298.15	656.38
10000.00	303.15	652.04
10000.00	308.15	647.69
10000.00	313.15	643.44
10000.00	318.15	639.02
10000.00	323.15	634.54
10000.00	328.15	630.26
20000.00	283.15	678.5
20000.00	288.15	674.51
20000.00	293.15	670.51
20000.00	298.15	666.62
20000.00	303.15	662.53
20000.00	308.15	658.58
20000.00	313.15	654.67
20000.00	318.15	650.69
20000.00	323.15	646.65
20000.00	328.15	642.58
30000.00	283.15	686.83
30000.00	288.15	683.05
30000.00	293.15	679.25
30000.00	298.15	675.66
30000.00	303.15	671.8
30000.00	308.15	668.08
30000.00	313.15	664.53
30000.00	318.15	660.78
30000.00	323.15	656.94
30000.00	328.15	653.14
40000.00	283.15	694.31
40000.00	288.15	690.77
40000.00	293.15	687.12
40000.00	298.15	683.71
40000.00	303.15	680.03
40000.00	308.15	676.55
40000.00	313.15	673.1
40000.00	318.15	669.72
40000.00	323.15	666.02
40000.00	328.15	662.51

50000.00	283.15	701.27
50000.00	288.15	697.81
50000.00	293.15	694.34
50000.00	298.15	691.09
50000.00	303.15	687.56
50000.00	308.15	684.38
50000.00	313.15	680.94
50000.00	318.15	677.73
50000.00	323.15	674.2
50000.00	328.15	670.88
60000.00	283.15	707.71
60000.00	288.15	704.32
60000.00	293.15	701.07
60000.00	298.15	697.88
60000.00	303.15	694.57
60000.00	308.15	691.41
60000.00	313.15	688.22
60000.00	318.15	685.05
60000.00	323.15	681.7
60000.00	328.15	678.64
65000.00	283.15	710.76
65000.00	288.15	707.61
65000.00	293.15	704.25
65000.00	298.15	701.14
65000.00	303.15	697.92
65000.00	308.15	695.23
65000.00	313.15	691.61
65000.00	318.15	688.58
65000.00	323.15	685.35
65000.00	328.15	682.59

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Legend

af:	Acentric Factor
ap:	Aniline Point
chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hcg:	Heat of Combustion, Gross form
hcn:	Heat of Combustion, Net Form
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase 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
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
kvisc:	Kinematic viscosity
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
rhof:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
sfust:	Entropy of fusion at a given temperature
sq:	Molar entropy at standard conditions

sl:	Liquid phase molar entropy at standard conditions
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tcondl:	Liquid thermal conductivity
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume
zc:	Critical Compressibility
zra:	Rackett Parameter

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