1-Decene

Other names:	1-C10H20
	1-n-Decene
	DECYLENE
	Dec-1-ene
	Decene-1
	Gulftene 10
	Linealene 10
	N-1-DECENE
	NSC 62122
	Neodene 10
	«alpha»-Decene
	Â«alphaÂ»-Decene
Inchi:	InChI=1S/C10H20/c1-3-5-7-9-10-8-6-4-2/h3H,1,4-10H2,2H3
InchiKey:	AFFLGGQVNFXPEV-UHFFFAOYSA-N
Formula:	C10H20
SMILES:	C=CCCCCCCCC
Mol. weight [g/mol]:	140.27
CAS:	872-05-9

Physical Properties

Property code	Value	Unit	Source
af	0.4910		KDB
aigt	508.15	K	KDB
chl	-6619.60 ± 1.80	kJ/mol	NIST Webbook
fpc	326.48	K	KDB
gf	121.10	kJ/mol	KDB
hf	-123.40	kJ/mol	NIST Webbook
hf	-124.20	kJ/mol	KDB
hf	-124.60	kJ/mol	NIST Webbook
hfl	-173.80 ± 1.90	kJ/mol	NIST Webbook
hfus	20.38	kJ/mol	Joback Method
hvap	50.40 ± 0.20	kJ/mol	NIST Webbook
hvap	50.50	kJ/mol	NIST Webbook
hvap	50.43 ± 0.20	kJ/mol	NIST Webbook
hvap	50.44	kJ/mol	NIST Webbook
ie	9.59 ± 0.01	eV	NIST Webbook
ie	9.42 ± 0.01	eV	NIST Webbook

ie	9.48	eV	NIST Webbook
ie	9.42 ± 0.01	eV	NIST Webbook
log10ws	-5.51		Estimated Solubility Method
log10ws	-5.51		Aqueous Solubility Prediction Method
logp	3.923		Crippen Method
mcvol	147.460	ml/mol	McGowan Method
nfpaf	%!d(float64=2)		KDB
pc	2220.00 ± 100.00	kPa	NIST Webbook
pc	2220.00	kPa	KDB
rhoc	238.45 ± 14.03	kg/m3	NIST Webbook
rinpol	992.00		NIST Webbook
rinpol	982.00		NIST Webbook
rinpol	991.00		NIST Webbook
rinpol	990.00		NIST Webbook
rinpol	986.00		NIST Webbook
rinpol	987.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	997.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	157.60		NIST Webbook
rinpol	153.90		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	988.80		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	989.00		NIST Webbook
rinpol	992.00		NIST Webbook
rinpol	985.00		NIST Webbook
rinpol	982.00		NIST Webbook
rinpol	989.00		NIST Webbook
rinpol	990.00		NIST Webbook
rinpol	985.10		NIST Webbook
rinpol	985.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	989.00		NIST Webbook
rinpol	989.00		NIST Webbook
rinpol	989.00		NIST Webbook
rinpol	988.60		NIST Webbook
rinpol	990.00		NIST Webbook
rinpol	989.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	989.00		NIST Webbook

rinpol	982.00	NIST Webbook
rinpol	983.00	NIST Webbook
rinpol	982.00	NIST Webbook
rinpol	990.00	NIST Webbook
rinpol	989.20	NIST Webbook
rinpol	990.10	NIST Webbook
rinpol	982.70	NIST Webbook
rinpol	982.20	NIST Webbook
rinpol	987.00	NIST Webbook
rinpol	988.00	NIST Webbook
rinpol	990.00	NIST Webbook
rinpol	992.00	NIST Webbook
rinpol	988.00	NIST Webbook
rinpol	988.00	NIST Webbook
rinpol	992.50	NIST Webbook
rinpol	993.00	NIST Webbook
rinpol	992.00	NIST Webbook
rinpol	987.00	NIST Webbook
rinpol	993.00	NIST Webbook
rinpol	993.00	NIST Webbook
rinpol	989.20	NIST Webbook
rinpol	989.50	NIST Webbook
rinpol	990.70	NIST Webbook
rinpol	985.00	NIST Webbook
rinpol	989.20	NIST Webbook
rinpol	989.50	NIST Webbook
rinpol	990.70	NIST Webbook
rinpol	988.00	NIST Webbook
rinpol	988.74	NIST Webbook
rinpol	988.81	NIST Webbook
rinpol	988.83	NIST Webbook
rinpol	991.63	NIST Webbook
rinpol	991.76	NIST Webbook
rinpol	991.73	NIST Webbook
rinpol	988.00	NIST Webbook
rinpol	991.00	NIST Webbook
rinpol	982.00	NIST Webbook
rinpol	997.00	NIST Webbook
rinpol	989.00	NIST Webbook
rinpol	989.00	NIST Webbook
rinpol	989.00	NIST Webbook
rinpol	991.00	NIST Webbook
rinpol	991.00	NIST Webbook
rinpol	989.00	NIST Webbook

ripol	1046.00		NIST Webbook
ripol	1052.00		NIST Webbook
ripol	1054.00		NIST Webbook
ripol	1055.00		NIST Webbook
ripol	1048.00		NIST Webbook
ripol	1050.00		NIST Webbook
ripol	1047.00		NIST Webbook
ripol	1039.00		NIST Webbook
ripol	1035.00		NIST Webbook
ripol	1043.00		NIST Webbook
ripol	1054.00		NIST Webbook
ripol	1020.00		NIST Webbook
ripol	1061.00		NIST Webbook
ripol	1047.00		NIST Webbook
ripol	1049.80		NIST Webbook
ripol	1048.50		NIST Webbook
ripol	1055.30		NIST Webbook
ripol	1051.70		NIST Webbook
ripol	1049.80		NIST Webbook
ripol	1048.50		NIST Webbook
ripol	1055.30		NIST Webbook
ripol	1051.70		NIST Webbook
ripol	1046.00		NIST Webbook
sl	425.01	J/mol×K	NIST Webbook
tb	443.60	K	KDB
tc	617.00	K	KDB
tc	617.00 ± 2.00	K	NIST Webbook
tf	207.06	K	Aqueous Solubility Prediction Method
tf	206.90	K	KDB
tt	206.89 ± 0.05	K	NIST Webbook
tt	206.47 ± 0.20	K	NIST Webbook
tt	206.88 ± 0.06	K	NIST Webbook
tt	206.89 ± 0.06	K	NIST Webbook
vc	0.584	m3/kmol	NIST Webbook
vc	0.584	m3/kmol	KDB
zc	0.2527230		KDB
zra	0.25		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source

cpg	378.63	J/mol×K	590.50	Joback Method
cpg	366.70	J/mol×K	562.90	Joback Method
cpg	299.13	J/mol×K	424.88	Joback Method
cpg	313.75	J/mol×K	452.48	Joback Method
cpg	327.80	J/mol×K	480.09	Joback Method
cpg	341.30	J/mol×K	507.69	Joback Method
cpg	354.26	J/mol×K	535.29	Joback Method
cpl	300.83	J/mol×K	298.15	NIST Webbook
dvisc	0.0006382	Pa×s	312.79	Joback Method
dvisc	0.0003070	Pa×s	387.52	Joback Method
dvisc	0.0002345	Pa×s	424.88	Joback Method
dvisc	0.0004257	Pa×s	350.15	Joback Method
dvisc	0.0053123	Pa×s	200.70	Joback Method
dvisc	0.0020999	Pa×s	238.06	Joback Method
dvisc	0.0010678	Pa×s	275.43	Joback Method
hfust	7.95	kJ/mol	198.30	NIST Webbook
hfust	13.81	kJ/mol	206.90	NIST Webbook
hfust	13.81	kJ/mol	206.90	NIST Webbook
hvapt	43.80	kJ/mol	414.00	NIST Webbook
hvapt	38.66	kJ/mol	443.70	KDB
hvapt	45.10	kJ/mol	402.50	NIST Webbook
rfi	1.42140		293.15	Isobaric Vapor-Liquid Equilibria of Hexane + 1-Decene and Octane + 1-Decene Mixtures
rfi	1.42139		293.15	Excess Volume of the 1-Propanol + 1-Alkene Systems in Terms of an Equation of State with Association
rhol	741.00	kg/m3	293.00	KDB
sfust	40.09	J/mol×K	198.30	NIST Webbook
sfust	66.73	J/mol×K	206.90	NIST Webbook
srf	0.02	N/m	298.20	KDB

Correlations

Information	Value
Property code	pvap

Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.48286e+01
Coeff. B	-3.90202e+03
Coeff. C	-5.78340e+01
Temperature range (K), min.	326.18
Temperature range (K), max.	467.83

Information	**Value**
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	1.10936e+02
Coeff. B	-9.75380e+03
Coeff. C	-1.41204e+01
Coeff. D	8.63327e-06
Temperature range (K), min.	206.89
Temperature range (K), max.	617.05

Sources

Activity coefficients at infinite dilution of alkanes and alkenes in 1-alkyl-3-methylimidazolium tetrafluoroborate:	https://www.doi.org/10.1016/j.fluid.2009.05.007
Activity coefficients at infinite dilution of organic solutes in the ionic liquid 1-ethyl-3-methylimidazolium trifluoromethanesulfonate using gas-liquid chromatography at T = (313.15, 323.15, and 333.15) K:	https://www.doi.org/10.1016/j.jct.2009.07.010
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 1-(3-hydroxypropyl)pyridinium bis(trifluoromethylsulfonyl)-amide:	https://www.doi.org/10.1016/j.jct.2011.04.018
Activity coefficients at infinite dilution, physicochemical and thermodynamic properties for organic solutes and water in the ionic liquid ethyl-dimethyl-(2-methoxyethyl)ammonium trifluorotris(perfluoroethyl)phosphate:	https://www.doi.org/10.1016/j.jct.2015.05.022
The study of activity coefficients at infinite dilution for organic solutes and water in ... using GLC:	https://www.doi.org/10.1016/j.jct.2013.09.007
A 1-alkylcyanopyridinium-based ionic liquid in the separation processes:	https://www.doi.org/10.1016/j.jct.2016.01.017
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid trihexyl-tetradecyl-phosphonium tricyanomethanide:	https://www.doi.org/10.1016/j.jct.2018.01.003
Thermodynamic Properties of Mixtures Containing Ionic Liquids. 8. Activity Coefficients at Infinite Dilution of Hydrocarbons, Alcohols, Esters, and Aldehydes in 1-Hexyl-3-methylimidazolium Bis(trifluoromethylsulfonyl) Imide Using Gas-Liquid Chromatography:	https://www.doi.org/10.1021/je0503554
Measurements of different thermodynamic properties of systems containing ionic liquids and correlation of these properties using modified UNIFAC (Dortmund):	https://www.doi.org/10.1016/j.fluid.2010.02.010
Separation of aliphatic from aromatic hydrocarbons and sulphur compounds ... measurements of activity coefficients at infinite dilution ...:	https://www.doi.org/10.1016/j.jct.2016.07.017
Activity coefficients at infinite dilution for organic solutes and water in the ionic liquid ...:	https://www.doi.org/10.1016/j.jct.2009.08.012
Activity coefficients at infinite dilution ... N,N-diethyl-N-methyl-N-(2-methoxy-ethyl)ammonium ...:	https://www.doi.org/10.1016/j.jct.2012.09.033
Activity coefficients at infinite dilution for organic solutes and water in a novel superbase derived protic ionic liquid:	https://www.doi.org/10.1016/j.jct.2015.05.014
Activity coefficients at infinite dilution for organic solutes and water in the ionic liquid 1-butyl-1-methylmorpholinium tricyanomethanide:	https://www.doi.org/10.1016/j.jct.2013.08.030
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C872059&Units=SI
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 1-(2-methoxyethyl)-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)-amide:	https://www.doi.org/10.1016/j.jct.2012.03.015
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Thermodynamics and selectivity of separation based on activity coefficients at infinite dilution of various solutes in 1-allyl-3-methylimidazolium bis{(trifluoromethyl)sulfonyl}imide ionic liquid:	https://www.doi.org/10.1016/j.jct.2016.06.028
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Activity Coefficients at Infinite Dilution by GLC in Alkanediamines as Stationary Phases:	https://www.doi.org/10.1021/je200628n
Gas–liquid chromatography measurements of activity coefficients at infinite dilution of hydrocarbons and alkanols in 1-alkyl-3-methylimidazolium bis(oxalato)borate:	https://www.doi.org/10.1016/j.fluid.2010.08.016

Activity coefficients at infinite dilution of organic solutes in the ionic liquid 1-octyl-3-methylimidazolium hexafluorophosphate using gas liquid chromatography at T = (313.15, 323.15, and 333.15) K:	https://www.doi.org/10.1016/j.jct.2009.12.004
Measurements of activity coefficients at infinite dilution for organic solutes and water in the ionic liquid 1-butyl-1-methylpyrrolidinium tricyanomethanide:	https://www.doi.org/10.1016/j.jct.2013.07.004
Activity Coefficients at Infinite Dilution of Organic Solutes and Water in [illegible] Diethylphosphate Using Gas Liquid Chromatography: Thermodynamic Properties of Mixtures Containing Ionic Liquids:	https://www.doi.org/10.1021/acs.jced.5b00980
Separation of binary mixtures hexane/hex-1-ene, [illegible]	https://www.doi.org/10.1016/j.jct.2017.11.017
Separation of binary mixtures hexane/hex-1-ene, cyclohexane/cyclohexene and ethylbenzene/styrene based on limiting activity coefficients:	https://www.doi.org/10.1016/j.jct.2017.03.004
Thermodynamics and activity coefficients at infinite dilution measurements for organic solutes and water in the ionic liquid 1-butyl-1-methylpyrrolidinium tetracyanoborate:	https://www.doi.org/10.1016/j.jct.2011.06.007
Ammonium ionic liquids in extraction of bio-butan-1-ol from water phase using activity coefficients at infinite dilution:	https://www.doi.org/10.1016/j.fluid.2018.09.024
KDB:	https://www.cheric.org/files/research/kdb/mol/mol344.mol
Thermodynamic Properties of Mixtures Containing Ionic Liquids. 5. Activity Coefficients at Infinite Dilution of Hydrocarbons, Alcohols, Esters, and Aldehydes in [illegible] Bis(trifluoromethyl-sulfonyl) Imide Using Gas-Liquid Chromatography:	https://www.doi.org/10.1021/je050125p
High selective water/butan-1-ol separation on investigation of limiting activity coefficients with [illegible]	https://www.doi.org/10.1016/j.fluid.2017.06.001
Isothermal Phase Equilibria and Excess Molar Enthalpies for Binary Systems with [illegible] at 323.15 K:	https://www.doi.org/10.1021/je700174h
Aqueous Solubility Prediction Method:	http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid [illegible]	https://www.doi.org/10.1016/j.jct.2012.05.017
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 4-(2-methoxyethyl)-4-methylmorpholinium [illegible]	https://www.doi.org/10.1016/j.jct.2012.08.016
Biomass-Derived Platform Chemicals: Thermodynamic Studies on the Extraction of 5-Hydroxymethylfurfural [illegible]	https://www.doi.org/10.1021/je300529j
Determination of Activity Coefficients at Infinite Dilution of Organic Solutes in the Ionic Liquid 1-(2-Hydroxyethyl)-3-methylimidazolium Nonafluoro-1-butanesulfonate Using Gas–Liquid Chromatography:	https://www.doi.org/10.1021/acs.jced.8b00080
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid [illegible]	https://www.doi.org/10.1016/j.jct.2013.05.008
Activity coefficients at infinite dilution of organic solutes in the ionic liquid [illegible]-3-methylimidazolium [illegible]	https://www.doi.org/10.1016/j.jct.2012.01.004
Measurements of activity coefficients at infinite dilution for organic solutes and water in the ionic liquid [illegible] chromatography at T = (313.15, 333.15, [illegible]	https://www.doi.org/10.1016/j.jct.2012.03.005
Thermodynamic Properties of Mixtures Containing Ionic Liquids. 6. Activity Coefficients at Infinite Dilution of Hydrocarbons, Alcohols, Esters, and Aldehydes in 1-Methyl-3-octyl-imidazolium Tetrafluoroborate Using Gas-Liquid Chromatography:	https://www.doi.org/10.1021/je050134y
The use of ionic liquids for separation of binary hydrocarbons mixtures based on gamma infinity data measurements:	https://www.doi.org/10.1016/j.jct.2018.07.024
Activity coefficients at infinite dilution of organic solvents and water in [illegible]. A literature review of hexane/hex-1-ene separation:	https://www.doi.org/10.1016/j.fluid.2016.02.004
Activity coefficients at infinite dilution of hydrocarbons, alkylbenzenes, and alcohols in the paramagnetic ionic liquid 1-butyl-3-methyl-imidazolium tetrachloridoferrate(III) using gas liquid chromatography:	https://www.doi.org/10.1016/j.jct.2008.09.004
Isobaric Vapor–Liquid Equilibria of Hexane + 1-Decene and Octane + 1-Decene Mixtures:	https://www.doi.org/10.1021/je700445y
Estimated Solubility Method:	http://pubs.acs.org/doi/suppl/10.1021/ci034243x/suppl_file/ci034243xsi20040112_053635.txt
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 1-(2-methoxyethyl)-1-methylpiperidinium bis(trifluoromethylsulfonyl)-amide:	https://www.doi.org/10.1016/j.jct.2012.01.019
Experimental and theoretical study on infinite dilution activity coefficients of various solutes in [illegible]	https://www.doi.org/10.1016/j.jct.2013.01.005
Thermodynamic Properties of Mixtures Containing Ionic Liquids. 9. Activity Coefficients at Infinite Dilution of Hydrocarbons, Alcohols, Esters, and Aldehydes in [illegible] Bis(trifluoromethylsulfonyl) Imide Using Gas-Liquid Chromatography and Static Method:	https://www.doi.org/10.1021/je050440b
Activity coefficients at infinite dilution of organic solutes in the ionic liquid [illegible]	https://www.doi.org/10.1016/j.jct.2010.02.006
Thermodynamics and activity coefficients at infinite dilution for organic solutes, water and diols in the ionic liquid [illegible]	https://www.doi.org/10.1016/j.jct.2014.04.024
Application of [illegible] types of separations problems: Activity coefficients at infinite dilution measurements utilizing GLC method:	https://www.doi.org/10.1016/j.fluid.2019.03.023
Measurements of activity coefficients at infinite dilution for organic solutes and water in the ionic liquid [illegible]	https://www.doi.org/10.1016/j.jct.2011.11.025
Infinite dilution activity coefficients, specific retention volumes and [illegible] hydrocarbons in C78H158 branched alkane solvent:	https://www.doi.org/10.1016/j.fluid.2006.07.015
Temperature dependence of the excess molar volume of 1-hexanol + 1-alkene systems in terms of an association and equation of state model:	https://www.doi.org/10.1016/j.fluid.2010.04.011
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 1-(2-methoxyethyl)-1-methylpyrrolidinium [illegible]	https://www.doi.org/10.1016/j.jct.2013.01.007
Thermodynamic study of molecular interaction selectivity in separation processes based on limiting activity coefficients:	https://www.doi.org/10.1016/j.jct.2018.02.014
Thermodynamics and activity coefficients at infinite dilution for organic solutes in the ionic liquid 1-butyl-1-methylpyrrolidinium [illegible]	https://www.doi.org/10.1016/j.fluid.2018.06.013
Determination of Activity Coefficients at Infinite Dilution of Solutes in [illegible] Using Inverse Gas Liquid Chromatography:	https://www.doi.org/10.1021/acs.jced.8b00635
New ionic liquid [P4,4,4,4][NTf2] in bio-butanol extraction on investigation of limiting activity coefficients:	https://www.doi.org/10.1016/j.fluid.2018.07.028
KDB Vapor Pressure Data:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=344
Measurements of activity coefficients at infinite dilution for organic solutes and water in N-hexylisoquinolinium thiocyanate, [HiQuin][SCN] using GLC:	https://www.doi.org/10.1016/j.jct.2013.02.004
Excess Volume of the 1-Propanol + 1-Alkene Systems in Terms of an Equation of State with Association:	https://www.doi.org/10.1021/je100595s

Measurement and prediction of activity coefficients at infinite dilution ( ), vapor-liquid equilibria (VLE) and excess enthalpies (HE) of binary systems with 1,1'-dialkyl-pyrrolidinium bis(trifluoromethylsulfonyl)imide using mod. UNIFAC (Dortmund):	https://www.doi.org/10.1016/j.fluid.2008.11.013
Assessment of Pyrrolidinium-Based Ionic Liquid for the Separation of Binary Mixtures Based on Activity Coefficients at Infinite Dilution	https://www.doi.org/10.1021/acs.jced.9b00341
Separation of binary mixtures based on limiting activity coefficients data using specific ammonium-based ionic liquid and modelling of thermodynamic functions:	https://www.doi.org/10.1016/j.fluid.2017.12.029
Activity Coefficients at Infinite Dilution of Organic Solutes in 1-Ethyl-3-methylimidazolium Tris(pentafluoroethyl)trifluorophosphate [EMIM][FAP] Using Gas-Liquid Chromatography	https://www.doi.org/10.1021/je9008443
Activity coefficients at infinite dilution of organic solutes in N-alkylpyridinium bis(trifluoromethylsulfonyl)imide (CnPYNTf2, n = 2, 4, 5) using gas-liquid chromatography	https://www.doi.org/10.1016/j.jct.2010.06.009
Separation of (water/butan-1-ol) binary systems based on activity coefficients at infinite dilution in phosphonium ionic liquids	https://www.doi.org/10.1016/j.jct.2019.05.011
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 4-(2-methoxyethyl)-4-methylmorpholinium bis(trifluoromethylsulfonyl)amide:	https://www.doi.org/10.1016/j.jct.2011.11.021
Paramagnetic Ionic Liquid 1-Butyl-3-methylimidazolium Tetrachlorocobaltate(II): Activity Coefficients at Infinite Dilution of Organic Solutes and Crystal Structure:	https://www.doi.org/10.1021/je800846j
Crippen Method	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Separation of water/butan-1-ol based on activity coefficients at infinite dilution in 1,3-didecyl-2-methylimidazolium dicyanamide ionic liquid:	https://www.doi.org/10.1016/j.jct.2017.10.003
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 4-(3-hydroxypropyl)-4-methylmorpholinium bis(trifluoromethylsulfonyl)amide:	https://www.doi.org/10.1016/j.jct.2015.02.024
Thermodynamics and limiting activity coefficients measurements for organic solutes and water in the ionic liquid 1-dodecyl-3-methylimidzolium bis(trifluoromethylsulfonyl) imide:	https://www.doi.org/10.1016/j.jct.2016.08.008

Legend

af:	Acentric Factor
aigt:	Autoignition Temperature
chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
fpc:	Flash Point (Closed Cup Method)
gf:	Standard Gibbs free energy of formation
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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
nfpaf:	NFPA Fire 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

sfust:	Entropy of fusion at a given temperature
sl:	Liquid phase molar entropy at standard conditions
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume
zc:	Critical Compressibility
zra:	Rackett Parameter