Thiophene

Other names:	CP 34
	Divinylene sulfide
	Furan, thio-
	Hopkin's lactic acid reagent
	Huile H50
	Huile HSO
	NSC 405073
	THIACYCLOPENTADIENE
	THIOFURAN
	Thiaphene
	Thiofen
	Thiofuram
	Thiofurfuran
	Thiole
	Thiophen
	Thiotetrole
	UN 2414
	USAF EK-1860
Inchi:	InChI=1S/C4H4S/c1-2-4-5-3-1/h1-4H
InchiKey:	YTPLMLYBLZKORZ-UHFFFAOYSA-N
Formula:	C4H4S
SMILES:	c1ccsc1
Mol. weight [g/mol]:	84.14
CAS:	110-02-1

Physical Properties

Property code	Value	Unit	Source
af	0.1960		KDB
affp	815.00	kJ/mol	NIST Webbook
basg	784.30	kJ/mol	NIST Webbook
dm	0.50	debye	KDB
gf	126.90	kJ/mol	KDB
hf	218.40	kJ/mol	NIST Webbook
hf	115.80	kJ/mol	KDB
hf	116.70	kJ/mol	NIST Webbook
hf	115.00 ± 1.00	kJ/mol	NIST Webbook
hf	116.40	kJ/mol	NIST Webbook

hvap	34.79	kJ/mol	NIST Webbook
hvap	35.40	kJ/mol	NIST Webbook
hvap	34.70 ± 0.03	kJ/mol	NIST Webbook
hvap	34.60	kJ/mol	NIST Webbook
ie	8.80	eV	NIST Webbook
ie	8.86 ± 0.01	eV	NIST Webbook
ie	8.87 ± 0.05	eV	NIST Webbook
ie	8.95 ± 0.02	eV	NIST Webbook
ie	8.85	eV	NIST Webbook
ie	8.90	eV	NIST Webbook
ie	8.90	eV	NIST Webbook
ie	8.85	eV	NIST Webbook
ie	8.87 ± 0.01	eV	NIST Webbook
ie	8.87	eV	NIST Webbook
ie	8.87 ± 0.01	eV	NIST Webbook
ie	8.86 ± 0.02	eV	NIST Webbook
ie	8.80 ± 0.05	eV	NIST Webbook
ie	8.85	eV	NIST Webbook
ie	9.12 ± 0.05	eV	NIST Webbook
ie	8.87 ± 0.01	eV	NIST Webbook
ie	9.05	eV	NIST Webbook
ie	8.90	eV	NIST Webbook
ie	8.80 ± 0.05	eV	NIST Webbook
ie	8.85	eV	NIST Webbook
ie	8.86 ± 0.01	eV	NIST Webbook
ie	9.00 ± 0.10	eV	NIST Webbook
log10ws	-1.33		Estimated Solubility Method
log10ws	-1.45		Aqueous Solubility Prediction Method
logp	1.748		Crippen Method
mcvol	64.110	ml/mol	McGowan Method
nfpaf	%!d(float64=3)		KDB
nfpah	%!d(float64=2)		KDB
pc	5690.00	kPa	KDB
pc	5700.00 ± 68.94	kPa	NIST Webbook
rinpol	686.00		NIST Webbook
rinpol	677.00		NIST Webbook
rinpol	650.00		NIST Webbook
rinpol	685.00		NIST Webbook
rinpol	643.23		NIST Webbook
rinpol	647.00		NIST Webbook
rinpol	646.00		NIST Webbook
rinpol	648.00		NIST Webbook
rinpol	655.00		NIST Webbook

rinpol	693.00	NIST Webbook
rinpol	680.00	NIST Webbook
rinpol	675.00	NIST Webbook
rinpol	686.00	NIST Webbook
rinpol	636.00	NIST Webbook
rinpol	626.00	NIST Webbook
rinpol	661.00	NIST Webbook
rinpol	661.00	NIST Webbook
rinpol	648.00	NIST Webbook
rinpol	646.00	NIST Webbook
rinpol	650.00	NIST Webbook
rinpol	648.00	NIST Webbook
rinpol	668.00	NIST Webbook
rinpol	658.00	NIST Webbook
rinpol	671.00	NIST Webbook
rinpol	649.00	NIST Webbook
rinpol	665.00	NIST Webbook
rinpol	665.00	NIST Webbook
rinpol	644.00	NIST Webbook
rinpol	673.00	NIST Webbook
rinpol	703.00	NIST Webbook
rinpol	645.00	NIST Webbook
rinpol	672.00	NIST Webbook
rinpol	690.00	NIST Webbook
rinpol	652.00	NIST Webbook
rinpol	671.00	NIST Webbook
rinpol	670.00	NIST Webbook
rinpol	693.00	NIST Webbook
rinpol	644.00	NIST Webbook
rinpol	665.00	NIST Webbook
rinpol	650.00	NIST Webbook
rinpol	665.00	NIST Webbook
rinpol	667.00	NIST Webbook
rinpol	647.00	NIST Webbook
rinpol	694.00	NIST Webbook
rinpol	680.00	NIST Webbook
rinpol	651.00	NIST Webbook
rinpol	632.00	NIST Webbook
rinpol	653.00	NIST Webbook
rinpol	665.00	NIST Webbook
rinpol	644.00	NIST Webbook
rinpol	650.00	NIST Webbook
rinpol	647.00	NIST Webbook
rinpol	700.00	NIST Webbook

rinpol	672.00	NIST Webbook
rinpol	649.00	NIST Webbook
rinpol	650.00	NIST Webbook
rinpol	694.00	NIST Webbook
rinpol	685.30	NIST Webbook
rinpol	641.00	NIST Webbook
rinpol	644.00	NIST Webbook
rinpol	632.00	NIST Webbook
rinpol	694.00	NIST Webbook
rinpol	686.10	NIST Webbook
rinpol	700.00	NIST Webbook
rinpol	652.00	NIST Webbook
rinpol	679.60	NIST Webbook
rinpol	685.30	NIST Webbook
rinpol	668.00	NIST Webbook
rinpol	668.00	NIST Webbook
rinpol	668.00	NIST Webbook
rinpol	683.00	NIST Webbook
rinpol	686.00	NIST Webbook
rinpol	694.00	NIST Webbook
rinpol	644.00	NIST Webbook
rinpol	694.00	NIST Webbook
rinpol	664.60	NIST Webbook
rinpol	641.00	NIST Webbook
rinpol	648.00	NIST Webbook
rinpol	693.00	NIST Webbook
rinpol	674.60	NIST Webbook
rinpol	675.00	NIST Webbook
rinpol	645.00	NIST Webbook
ripol	1028.00	NIST Webbook
ripol	1054.00	NIST Webbook
ripol	1039.00	NIST Webbook
ripol	1046.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1021.00	NIST Webbook
ripol	1054.00	NIST Webbook
ripol	1035.00	NIST Webbook
ripol	1010.00	NIST Webbook
ripol	1017.00	NIST Webbook
ripol	1018.00	NIST Webbook
ripol	1025.00	NIST Webbook
ripol	1023.00	NIST Webbook
ripol	1054.00	NIST Webbook

ripol	1035.00		NIST Webbook
ripol	1035.00		NIST Webbook
ripol	1032.00		NIST Webbook
ripol	1034.00		NIST Webbook
ripol	1032.00		NIST Webbook
ripol	1035.00		NIST Webbook
ripol	1022.00		NIST Webbook
ripol	995.00		NIST Webbook
ripol	1041.00		NIST Webbook
ripol	1021.00		NIST Webbook
ripol	1021.00		NIST Webbook
ripol	1021.00		NIST Webbook
ripol	1026.00		NIST Webbook
ripol	1024.00		NIST Webbook
ripol	1024.00		NIST Webbook
ripol	1010.00		NIST Webbook
ripol	1030.00		NIST Webbook
ripol	1034.00		NIST Webbook
ripol	1028.00		NIST Webbook
ripol	1022.00		NIST Webbook
ripol	1022.00		NIST Webbook
tb	357.35 ± 0.10	K	NIST Webbook
tb	357.90 ± 0.50	K	NIST Webbook
tb	356.80 ± 0.50	K	NIST Webbook
tb	357.30	K	NIST Webbook
tb	357.10	K	KDB
tb	357.42	K	Isobaric vapor-liquid equilibrium for four binary systems of thiophene
tb	357.42	K	Isobaric vapor-liquid equilibrium for systems containing sulfur compounds
tb	357.40	K	NIST Webbook
tb	357.26 ± 0.20	K	NIST Webbook
tb	357.15 ± 0.50	K	NIST Webbook
tc	580.00 ± 2.00	K	NIST Webbook
tc	579.40 ± 0.30	K	NIST Webbook
tc	579.40	K	NIST Webbook
tc	579.40	K	KDB
tf	234.93 ± 0.05	K	NIST Webbook
tf	234.94 ± 0.10	K	NIST Webbook
tf	233.15 ± 0.40	K	NIST Webbook
tf	233.70	K	KDB
tf	234.68	K	Aqueous Solubility Prediction Method

tt	235.02 ± 0.05	K	NIST Webbook
tt	234.95 ± 0.06	K	NIST Webbook
tt	233.70 ± 0.40	K	NIST Webbook
tt	234.90 ± 0.08	K	NIST Webbook
vc	0.219	m3/kmol	KDB
vc	0.220 ± 0.005	m3/kmol	NIST Webbook
zc	0.2586670		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
hfust	4.97	kJ/mol	235.20	NIST Webbook
hsubt	46.80	kJ/mol	211.50	NIST Webbook
hsubt	49.00	kJ/mol	202.50	NIST Webbook
hvapt	31.46	kJ/mol	357.00	KDB
hvapt	33.60 ± 0.10	kJ/mol	319.00	NIST Webbook
hvapt	32.70 ± 0.10	kJ/mol	336.00	NIST Webbook
hvapt	34.10	kJ/mol	333.00	NIST Webbook
hvapt	34.80	kJ/mol	353.00	NIST Webbook
hvapt	31.50 ± 0.10	kJ/mol	357.00	NIST Webbook
hvapt	35.80	kJ/mol	324.00	NIST Webbook
hvapt	31.48	kJ/mol	357.30	NIST Webbook
hvapt	32.60	kJ/mol	353.50	NIST Webbook
hvapt	35.00	kJ/mol	258.50	NIST Webbook
hvapt	33.70	kJ/mol	352.00	NIST Webbook
pvap	16.61	kPa	308.15	Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid and Predictions by the Conductor-like Screening Model for Real Solvents
pvap	20.52	kPa	313.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid

pvap	13.23	kPa	303.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid
pvap	44.88	kPa	333.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid
pvap	63.71	kPa	343.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid
pvap	88.33	kPa	353.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid
pvap	119.90	kPa	363.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid
pvap	13.29	kPa	303.15	Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid and Predictions by the Conductor-like Screening Model for Real Solvents
pvap	8.22	kPa	293.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid

pvap	20.59	kPa	313.15	Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid and Predictions by the Conductor-like Screening Model for Real Solvents
pvap	25.31	kPa	318.15	Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid and Predictions by the Conductor-like Screening Model for Real Solvents
pvap	30.87	kPa	323.15	Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid and Predictions by the Conductor-like Screening Model for Real Solvents
pvap	37.40	kPa	328.15	Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid and Predictions by the Conductor-like Screening Model for Real Solvents
pvap	44.98	kPa	333.15	Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid and Predictions by the Conductor-like Screening Model for Real Solvents
pvap	16.70	kPa	308.12	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene

pvap	16.50	kPa	308.13	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene
pvap	17.10	kPa	308.14	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene
pvap	17.10	kPa	308.15	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene
pvap	49.70	kPa	335.61	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene
pvap	49.60	kPa	335.84	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene
pvap	49.60	kPa	335.87	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene
pvap	4.89	kPa	283.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid

pvap	6.78	kPa	288.15	Experimental Measurement and Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process Using Ionic Liquids
pvap	8.70	kPa	293.15	Experimental Measurement and Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process Using Ionic Liquids
pvap	10.37	kPa	298.15	Experimental Measurement and Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process Using Ionic Liquids
pvap	2.78	kPa	273.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid
pvap	8.74	kPa	293.15	Experimental Measurement and Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process Using Ionic Liquids
pvap	10.58	kPa	298.15	Experimental Measurement and Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process Using Ionic Liquids

pvap	12.98	kPa	303.15	Experimental Measurement and Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process Using Ionic Liquids
pvap	30.80	kPa	323.15	Measurement and correlation of vapour pressures of pyridine and thiophene with [EMIM][SCN] ionic liquid
pvap	6.75	kPa	288.15	Experimental Measurement and Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process Using Ionic Liquids
pvap	51.20	kPa	336.83	Vapor-Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + 2-Methylpropene
rfi	1.52581		298.15	Measurement and Correlation of Liquid-Liquid Equilibria of Two Imidazolium Ionic Liquids with Thiophene and Methylcyclohexane
rfi	1.52530		298.15	Thiophene separation from aliphatic hydrocarbons using the 1-ethyl-3-methylimidazolium ethylsulfate ionic liquid
rfi	1.52581		298.15	(Liquid + liquid) equilibria of [C8mim][NTf2] ionic liquid with a sulfur-component and hydrocarbons

rfi	1.52550	298.15	Vapor-Liquid Equilibrium for Binary System of 1-Propanethiol, Thiophene, and Diethyl Sulfide with Toluene at 90.03 kPa
rfi	1.52550	298.15	Vapor-Liquid Equilibrium for Binary System of Thiophene + n-Hexane at (338.15 and 323.15) K and Thiophene + 1-Hexene at (333.15 and 323.15) K
rfi	1.52869	298.15	Vapor Liquid Equilibrium for Methoxymethane + Thiophene, + Diethylsulfide, + 2-Methyl-2-propanethiol and 1-Hexene, + 1-Propanethiol
rfi	1.52581	298.15	Liquid-Liquid Equilibria for Systems Composed by 1-Methyl-3-octylimidazolium Tetrafluoroborate Ionic Liquid, Thiophene, and n-Hexane or Cyclohexane
rfi	1.52530	298.10	Liquid-Liquid Equilibria for [C8mim][NTf2] + Thiophene + 2,2,4-Trimethylpentane or + Toluene
rfi	1.52581	298.15	Phase behaviour of 1-methyl-3-octylimidazolium bis[trifluoromethylsulfonyl]imide with thiophene and aliphatic hydrocarbons: The influence of n-alkane chain length
rfi	1.52550	298.15	Vapor liquid equilibrium for binary system of thiophene + 2,2,4-trimethylpentane at 343.15 and 353.15K and thiophene + 2-ethoxy-2-methylpropane at 333.15 and 343.15K

rhol	1071.00	kg/m3	289.00	KDB
rhol	1058.61	kg/m3	298.15	Hexyl dimethylpyridinium ionic liquids for desulfurization of fuels. Effect of the position of the alkyl side chains
rhol	1058.48	kg/m3	298.15	Phase behaviour of ionic liquid 1-butyl-1-methylpyrrolidinium tris(pentafluoroethyl)trifluorophosphate with alcohols, water and aromatic hydrocarbons
rhol	1058.56	kg/m3	298.15	Thermodynamic behavior of thiophene with octane, 1-hexyl-3-methylimidazolium bromide, or 1-octyl-3-methylimidazolium bromide in dilute region at T = (288.15 to 303.15) K
rhol	1058.46	kg/m3	298.15	Measurements and equation-of-state modelling of thermodynamic properties of binary mixtures of 1-butyl-1-methylpyrrolidinium tetracyanoborate ionic liquid with molecular compounds
rhol	1058.56	kg/m3	298.15	Volumetric, acoustic, and refractometric properties of (thiophene + hexane/cyclohexane) solutions in the presence of some imidazolium based ionic liquids at T = 298.15 K
rhol	1058.92	kg/m3	298.15	Extraction desulfurization process of fuels with ionic liquids

rhol	1058.92	kg/m3	298.15	Effect of the alkyl side chain of the 1-alkylpiperidinium-based ionic liquids on desulfurization of fuels
rhol	1058.64	kg/m3	298.15	Separation of sulfur compounds from alkanes with 1-alkylcyanopyridinium-based ionic liquids
rhol	1058.50	kg/m3	298.15	Solvent extraction of thiophene from n-alkanes (C7, C12, and C16) using the ionic liquid [C8mim][BF4]
rhol	1058.56	kg/m3	298.15	Phase diagrams of binary systems containing tricyanomethanide-based ionic liquids and thiophene or pyridine - new experimental data and PC-SAFT modeling
rhol	1058.48	kg/m3	298.15	Phase behaviour of tricyanomethanide-based ionic liquids with alcohols and hydrocarbons
rhol	1058.61	kg/m3	298.15	Desulfurization of fuels by liquid-liquid extraction with1-ethyl-3-methylimidazolium ionic liquids
srf	0.03	N/m	293.20	KDB

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.42640e+01
Coeff. B	-2.98618e+03
Coeff. C	-4.77130e+01
Temperature range (K), min.	234.94

Temperature range (K), max.	579.35

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	8.19473e+01
Coeff. B	-6.84652e+03
Coeff. C	-1.00558e+01
Coeff. D	7.42178e-06
Temperature range (K), min.	234.94
Temperature range (K), max.	579.35

Datasets

Mass density, kg/m3

Temperature, K - Liquid	Pressure, kPa - Liquid	Mass density, kg/m3 - Liquid
293.15	101.00	1063.59
303.15	101.00	1051.55
313.09	1029.00	1040.96
313.09	1969.00	1041.84
313.09	2970.00	1042.78
313.09	3987.00	1043.71
313.09	5055.00	1044.72
313.09	5952.00	1045.51
313.09	6937.00	1046.43
313.09	8032.00	1047.39
313.09	9218.00	1048.44
313.09	10045.00	1049.18
313.09	11012.00	1050.03
313.09	12014.00	1050.9
313.09	12995.00	1051.74
313.09	13961.00	1052.59
313.09	14970.00	1053.43
313.09	15953.00	1054.26
313.09	17004.00	1055.16
313.09	18003.00	1055.95
313.09	18904.00	1056.76

313.15	101.00	1039.32
323.01	1047.00	1028.97
323.01	2059.00	1029.98
323.01	3070.00	1031.02
323.01	4047.00	1031.99
323.01	5002.00	1032.9
323.01	6005.00	1033.9
323.01	7068.00	1034.92
323.01	8021.00	1035.81
323.01	9013.00	1036.76
323.01	10005.00	1037.67
323.01	10991.00	1038.62
323.01	12034.00	1039.58
323.01	12977.00	1040.44
323.01	13999.00	1041.38
323.01	14991.00	1042.26
323.01	15995.00	1043.17
323.01	16998.00	1044.03
323.01	17983.00	1044.93
323.01	18951.00	1045.78
323.15	101.00	1026.98
332.85	1015.00	1016.93
332.85	2035.00	1018.0
332.85	3004.00	1019.06
332.85	3964.00	1020.05
332.85	4991.00	1021.14
332.85	6001.00	1022.17
332.85	7014.00	1023.21
332.85	7998.00	1024.2
332.85	9009.00	1025.23
332.85	9995.00	1026.19
332.85	10989.00	1027.18
332.85	12006.00	1028.17
332.85	13009.00	1029.18
332.85	13971.00	1030.09
332.85	15006.00	1031.04
332.85	15990.00	1032.01
332.85	17050.00	1033.03
332.85	17976.00	1033.88
332.85	19018.00	1034.92
333.15	101.00	1014.58
342.77	1039.00	1004.75
342.77	2072.00	1005.93
342.77	3033.00	1007.02

342.77	4023.00	1008.17
342.77	5027.00	1009.26
342.77	6033.00	1010.36
342.77	7008.00	1011.44
342.77	7998.00	1012.5
342.77	9005.00	1013.59
342.77	10000.00	1014.65
342.77	10963.00	1015.65
342.77	12009.00	1016.72
342.77	13023.00	1017.82
342.77	13928.00	1018.74
342.77	15009.00	1019.83
342.77	15998.00	1020.79
342.77	17025.00	1021.8
342.77	17995.00	1022.8
342.77	19013.00	1023.79
342.77	20001.00	1024.73
343.15	101.00	1002.15
352.67	1064.00	992.39
352.67	2003.00	993.54
352.67	3024.00	994.79
352.67	4003.00	995.98
352.67	5048.00	997.22
352.67	6013.00	998.36
352.67	7013.00	999.51
352.67	8050.00	1000.73
352.67	9018.00	1001.82
352.67	10003.00	1002.93
352.67	11003.00	1004.07
352.67	12004.00	1005.16
352.67	12998.00	1006.25
352.67	14005.00	1007.34
352.67	15038.00	1008.46
352.67	16006.00	1009.49
352.67	17027.00	1010.58
352.67	18001.00	1011.6
352.67	19031.00	1012.65
352.67	20017.00	1013.74
353.15	101.00	989.76
362.51	1007.00	979.8
362.51	2022.00	981.13
362.51	3029.00	982.49
362.51	4004.00	983.74
362.51	5006.00	985.01

362.51	6003.00	986.27
362.51	6999.00	987.5
362.51	7993.00	988.73
362.51	9007.00	989.99
362.51	9993.00	991.16
362.51	10997.00	992.36
362.51	11993.00	993.56
362.51	12838.00	994.53
362.51	14038.00	995.94
362.51	15044.00	997.1
362.51	16029.00	998.18
362.51	17006.00	999.27
362.51	18016.00	1000.4
362.51	18987.00	1001.47

Reference *https://www.doi.org/10.1016/j.fluid.2005.07.017*

Temperature, K	Pressure, kPa	Mass density, kg/m3
298.15	100.00	1058.44

Reference *https://www.doi.org/10.1016/j.jct.2013.02.020*

Temperature, K	Pressure, kPa	Mass density, kg/m3
283.15	100.00	1076.4
288.15	100.00	1070.54
293.15	100.00	1064.59
298.15	100.00	1058.65
303.15	100.00	1052.71
308.15	100.00	1046.7
313.15	100.00	1040.68
318.15	100.00	1034.64
323.15	100.00	1028.59
328.15	100.00	1022.43
333.15	100.00	1016.27
338.15	100.00	1010.08
283.15	2000.00	1077.94
288.15	2000.00	1072.11
293.15	2000.00	1066.21
298.15	2000.00	1060.32
303.15	2000.00	1054.43
308.15	2000.00	1048.48
313.15	2000.00	1042.52

318.15	2000.00	1036.54
323.15	2000.00	1030.52
328.15	2000.00	1024.49
333.15	2000.00	1018.35
338.15	2000.00	1012.22
283.15	5000.00	1080.27
288.15	5000.00	1074.53
293.15	5000.00	1068.67
298.15	5000.00	1062.91
303.15	5000.00	1057.07
308.15	5000.00	1051.21
313.15	5000.00	1045.35
318.15	5000.00	1039.44
323.15	5000.00	1033.54
328.15	5000.00	1027.57
333.15	5000.00	1021.56
338.15	5000.00	1015.53
283.15	7000.00	1081.81
288.15	7000.00	1076.12
293.15	7000.00	1070.33
298.15	7000.00	1064.57
303.15	7000.00	1058.82
308.15	7000.00	1052.99
313.15	7000.00	1047.19
318.15	7000.00	1041.36
323.15	7000.00	1035.52
328.15	7000.00	1029.6
333.15	7000.00	1023.65
338.15	7000.00	1017.69
283.15	10000.00	1084.09
288.15	10000.00	1078.46
293.15	10000.00	1072.75
298.15	10000.00	1067.05
303.15	10000.00	1061.36
308.15	10000.00	1055.61
313.15	10000.00	1049.91
318.15	10000.00	1044.15
323.15	10000.00	1038.37
328.15	10000.00	1032.58
333.15	10000.00	1026.72
338.15	10000.00	1020.86
283.15	15000.00	1087.78
288.15	15000.00	1082.24
293.15	15000.00	1076.63

298.15	15000.00	1071.07
303.15	15000.00	1065.48
308.15	15000.00	1059.87
313.15	15000.00	1054.25
318.15	15000.00	1048.65
323.15	15000.00	1042.99
328.15	15000.00	1037.33
333.15	15000.00	1031.63
338.15	15000.00	1025.92
283.15	20000.00	1091.37
288.15	20000.00	1085.9
293.15	20000.00	1080.39
298.15	20000.00	1074.94
303.15	20000.00	1069.46
308.15	20000.00	1063.97
313.15	20000.00	1058.47
318.15	20000.00	1052.97
323.15	20000.00	1047.45
328.15	20000.00	1041.91
333.15	20000.00	1036.34
338.15	20000.00	1030.78
283.15	25000.00	1094.82
288.15	25000.00	1089.45
293.15	25000.00	1084.05
298.15	25000.00	1078.69
303.15	25000.00	1073.3
308.15	25000.00	1067.92
313.15	25000.00	1062.52
318.15	25000.00	1057.12
323.15	25000.00	1051.73
328.15	25000.00	1046.31
333.15	25000.00	1040.87
338.15	25000.00	1035.41
283.15	30000.00	1098.18
288.15	30000.00	1092.91
293.15	30000.00	1087.58
298.15	30000.00	1082.3
303.15	30000.00	1077.03
308.15	30000.00	1071.73
313.15	30000.00	1066.43
318.15	30000.00	1061.15
323.15	30000.00	1055.85
328.15	30000.00	1050.54
333.15	30000.00	1045.21

338.15	30000.00	1039.88
283.15	35000.00	1101.44
288.15	35000.00	1096.24
293.15	35000.00	1091.01
298.15	35000.00	1085.81
303.15	35000.00	1080.62
308.15	35000.00	1075.4
313.15	35000.00	1070.21
318.15	35000.00	1065.02
323.15	35000.00	1059.82
328.15	35000.00	1054.61
333.15	35000.00	1049.39
338.15	35000.00	1044.17
283.15	40000.00	1104.61
288.15	40000.00	1099.5
293.15	40000.00	1094.34
298.15	40000.00	1089.21
303.15	40000.00	1084.1
308.15	40000.00	1078.99
313.15	40000.00	1073.88
318.15	40000.00	1068.77
323.15	40000.00	1063.67
328.15	40000.00	1058.55
333.15	40000.00	1053.43
338.15	40000.00	1048.31
283.15	45000.00	1107.7
288.15	45000.00	1102.65
293.15	45000.00	1097.57
298.15	45000.00	1092.53
303.15	45000.00	1087.49
308.15	45000.00	1082.45
313.15	45000.00	1077.41
318.15	45000.00	1072.41
323.15	45000.00	1067.38
328.15	45000.00	1062.36
333.15	45000.00	1057.32
338.15	45000.00	1052.28
283.15	50000.00	1110.71
288.15	50000.00	1105.72
293.15	50000.00	1100.7
298.15	50000.00	1095.73
303.15	50000.00	1090.79
308.15	50000.00	1085.8
313.15	50000.00	1080.86

318.15	50000.00	1075.92
323.15	50000.00	1070.98
328.15	50000.00	1066.05
333.15	50000.00	1061.09
338.15	50000.00	1056.13
283.15	55000.00	1113.62
288.15	55000.00	1108.7
293.15	55000.00	1103.77
298.15	55000.00	1098.86
303.15	55000.00	1093.96
308.15	55000.00	1089.07
313.15	55000.00	1084.2
318.15	55000.00	1079.33
323.15	55000.00	1074.48
328.15	55000.00	1069.6
333.15	55000.00	1064.72
338.15	55000.00	1059.87
283.15	60000.00	1116.47
288.15	60000.00	1111.61
293.15	60000.00	1106.72
298.15	60000.00	1101.89
303.15	60000.00	1097.06
308.15	60000.00	1092.23
313.15	60000.00	1087.42
318.15	60000.00	1082.65
323.15	60000.00	1077.86
328.15	60000.00	1073.07
333.15	60000.00	1068.26
338.15	60000.00	1063.48
283.15	65000.00	1119.27
288.15	65000.00	1114.44
293.15	65000.00	1109.63
298.15	65000.00	1104.85
303.15	65000.00	1100.09
308.15	65000.00	1095.31
313.15	65000.00	1090.59
318.15	65000.00	1085.87
323.15	65000.00	1081.13
328.15	65000.00	1076.42
333.15	65000.00	1071.7
338.15	65000.00	1066.99

Reference *https://www.doi.org/10.1016/j.jct.2016.08.005*

Sources

Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquids:	https://www.doi.org/10.1016/j.jct.2011.04.018
Desulfurization of fuels by liquid-liquid extraction:	https://www.doi.org/10.1016/j.fluid.2013.07.028
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
Activity Coefficients at Infinite Dilution and Physicochemical Properties for Organic Solutes and Water in the Ionic Liquids:	https://www.doi.org/10.1021/acs.jced.8b00600
Activity coefficients at infinite dilution for Organic Compounds Dissolved in 4-(2-Methoxyethyl)-4-methylmorpholinium Bis(trifluoromethylsulfonyl)imide Ionic Liquid:	https://www.doi.org/10.1016/j.jct.2012.05.017
Activity Coefficients at Infinite Dilution for Organic Solutes in the Ionic Liquid 1-Butyl-3-methylimidazolium Methylsulfate:	https://www.doi.org/10.1021/je300692s
Thermodynamics and selectivity of separation based on activity coefficients for 1-alkylpyridinium-based ionic liquids with various alkyl chains:	https://www.doi.org/10.1016/j.jct.2016.06.028
Activity Coefficients at Infinite Dilution of 35 Solutes in the Ionic Liquid 1-Butyl-3-methylimidazolium Tosylate, Using Gas−Liquid Chromatography:	https://www.doi.org/10.1016/j.jct.2013.12.029
Ethylbenzene/styrene based on gamma activity coefficients at infinite dilution and its influence on the Gasification Process: Liquid Liquid Equilibrium of ternary systems: Water + Solvent + Xylene and Methyl Hexadecanoate + Model Molecules of Pyrolysis Oil:	https://www.doi.org/10.1021/je100410k
Activity coefficients at infinite dilution, Phenanthrene and Anthracene in the ionic liquid 1-butyl-3-methylimidazolium (methanesulfonate):	https://www.doi.org/10.1016/j.jct.2017.11.017
Modeling of Phase Diagrams of Binary Systems Encountered in the Gasoline Desulfurization Process using Ionic Liquids:	https://www.doi.org/10.1016/j.jct.2013.01.005
Thermodynamics and limiting activity coefficients measurements for organic solutes in 1-methylimidazolium based ionic liquids:	https://www.doi.org/10.1021/acs.jced.6b00857
Quaternary liquid−liquid equilibria for systems containing water + ionic liquid 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide:	https://www.doi.org/10.1016/j.fluid.2014.11.020
Measurements of activity coefficients at infinite dilution for organic solutes in cyclohexane at 298.15 K: Experiments and modeling with conformal solution, and quantum chemical and thermodynamic properties:	https://www.doi.org/10.1016/j.jct.2014.07.020
Measurement and correlation of vapor pressure of benzene and thiophene with [EMIM][SCN] ionic liquid:	https://www.doi.org/10.1016/j.fluid.2010.10.008
Thermodynamics and activity coefficients at infinite dilution for organic solutes in 1-butyl-1-methylpyrrolidinium tetracyanoborate:	https://www.doi.org/10.1021/je400510j
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquids:	https://www.doi.org/10.1016/j.jct.2008.12.018
Activity coefficients at infinite dilution of organic solvents and water in 4-(2-methoxyethyl)-4-methylmorpholinium methanesulfonate:	https://www.doi.org/10.1016/j.jct.2016.08.008
Extraction of benzothiazole and thiophene from their mixtures with n-heptane using tetrahexylammonium tribromide based eutectic solvents as extractive denitrogenation and desulfurization agents:	https://www.doi.org/10.1016/j.jct.2013.02.020
Activity coefficients at infinite dilution for organic solutes and water in 1-benzyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide:	https://www.doi.org/10.1016/j.jct.2013.02.004
Activity coefficients at infinite dilution, physicochemical and thermodynamic properties of organic solutes and water in 1-butyl-3-methylimidazolium tetracyanoborate [TCB] using GLC:	https://www.doi.org/10.1016/j.jct.2015.05.022
Measurement and correlation of vapor pressure of benzene and thiophene with [BMIM][BF4] ionic liquid:	https://www.doi.org/10.1016/j.fluid.2008.09.018
Thermodynamics and activity coefficients at infinite dilution of organic solvents and water in 1-butyl-1-methylpyrrolidinium tetracyanoborate:	https://www.doi.org/10.1016/j.jct.2013.09.032
Experimental Determination of the Solubility of Thiophene in Carbon Dioxide and in Carbon Dioxide + Ethanol:	https://www.doi.org/10.1016/j.jct.2013.12.033
KDB-Pure (Korean Thermophysical Properties Database):	https://www.doi.org/10.1016/j.fluid.2015.12.025
Extraction of benzothiazole and thiophene from their mixtures with n-heptane using tetrahexylammonium tribromide based eutectic solvents as extractive denitrogenation and desulfurization agents:	https://www.doi.org/10.1016/j.jct.2011.06.007
Activity coefficients at infinite dilution (1-benzyl-3-methylimidazolium tetracyanoborate):	https://www.doi.org/10.1021/je200195q
Activity Coefficients at Infinite Dilution of Organic Compounds in Four New Ionic Liquids Based on Bis(trifluoromethylsulfonyl)imide:	https://www.doi.org/10.1016/j.fluid.2004.11.018
Thermodynamics and activity coefficients at infinite dilution of organic solvents and water in 4-(2-methoxyethyl)-4-methylmorpholinium methanesulfonate:	https://www.doi.org/10.1016/j.jct.2011.11.021
Activity coefficients at infinite dilution for Organic Compounds Dissolved in 1-Butyl-1-methylpyrrolidinium Bis(trifluoromethylsulfonyl)amide Ionic Liquid:	https://www.doi.org/10.1016/j.fluid.2016.02.004
Thermodynamics and activity coefficients at infinite dilution for 1-alkylcyanopyridinium-based ionic liquids with various alkyl chains:	https://www.doi.org/10.1016/j.fluid.2018.06.013
Activity coefficients at infinite dilution for organic solutes and water in 1-butyl-1-methylpyrrolidinium dicyanamide:	https://www.doi.org/10.1016/j.fluid.2018.10.017
Extraction of benzothiazole and thiophene from their mixtures with n-heptane using tetrahexylammonium tribromide based eutectic solvents as extractive denitrogenation and desulfurization agents:	https://www.doi.org/10.1016/j.jct.2012.09.017
Evaluation of the Performance of Trigonal Tetratopic Ionic Liquids for Separation Problems:	https://www.doi.org/10.1016/j.jct.2016.01.017
Experimental Determination of the Solubility of Thiophene in Carbon Dioxide and in Carbon Dioxide + Ethanol:	https://www.doi.org/10.1021/je050097a
Desulfurization of fuels by liquid-liquid extraction:	https://www.doi.org/10.1016/j.fluid.2017.10.017
KDB-Pure (Korean Thermophysical Properties Database):	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1864
Extraction of benzothiazole and thiophene from their mixtures with n-heptane using tetrahexylammonium tribromide based eutectic solvents as extractive denitrogenation and desulfurization agents:	https://www.doi.org/10.1016/j.fluid.2018.07.023
Evaluation of the Performance of Trigonal Tetratopic Ionic Liquids for Separation Problems:	https://www.doi.org/10.1021/je201129y

Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic	https://www.doi.org/10.1016/j.jct.2013.05.008
Phase diagrams of binary systems containing 1-(2-methoxyethyl)-3-methylimidazolium phenolate or pyridine	https://www.doi.org/10.1016/j.fluid.2015.04.031
High pressure vapor-liquid equilibria for the systems thiophene + propane, 1-butene + thiophene, and thiophene + n-hexane	https://www.doi.org/10.1016/j.fluid.2005.06.029
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic	https://www.doi.org/10.1016/j.jct.2012.01.019
Thermodynamic Properties of Mixtures Containing Ionic Liquids: Activity	https://www.doi.org/10.1021/je060033f
Vapor-Liquid Equilibria for Mixtures of 1-(2-Methoxyethyl)-1-Methylpiperidinium	https://www.doi.org/10.1021/je3013028
Ternary Liquid-Liquid Equilibrium Data for Thiophene + Heptane + 1-Butyl-3-Methylimidazolium Bromide	https://www.doi.org/10.1016/j.jct.2013.01.033
Binary Liquid Equilibria for Thiophene + 1-Hexene, 1-Butanethiol and 1-Hexene, 1-Propanethiol + 1-Butyl-3-Methylimidazolium Bromide	https://www.doi.org/10.1021/je800071q
Inverse Gas Chromatography: 2,2,4-Trimethylpentane or Toluene + Ionic Liquid for the Separation of	https://www.doi.org/10.1021/acs.jced.9b00341
Binary Mixtures Based on Activity Coefficients at Infinite Dilution	https://www.doi.org/10.1016/j.jct.2015.02.024
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic	https://www.doi.org/10.1016/j.jct.2010.01.004
Gas-liquid chromatography measurements of activity coefficients	https://www.doi.org/10.1021/acs.jced.8b00659
Experimental Measurements and Modeling Study of Liquid-Liquid	https://www.doi.org/10.1016/j.jct.2013.09.007
Bis(trifluoromethylsulfonyl)-amide: Ternary Liquid-Liquid Equilibrium Data for Thiophene + n-Hexane + 1-Butyl-1-methylpyrrolidinium	https://www.doi.org/10.1016/j.jct.2018.01.003
Activity coefficients at infinite dilution and physicochemical properties for	https://www.doi.org/10.1016/j.jct.2012.09.033
Measurements of activity coefficients at infinite dilution for organic solutes in	https://www.doi.org/10.1016/j.fluid.2018.01.019
Activity Coefficients at Infinite Dilution Measurements for Organic Solutes and	https://www.doi.org/10.1021/je900890u
Phase equilibria study of the ternary system 1-hexyl-3-methylimidazolium thiocyanate + thiophene + aliphatic and aromatic	https://www.doi.org/10.1016/j.jct.2013.04.011
Activity coefficients at infinite dilution measurements for organic solutes and systems in the ionic liquid	https://www.doi.org/10.1016/j.jct.2008.12.005
Aqueous Solubility Prediction Method: triethylsulphonium bis(trifluoromethylsulfonyl)imide:	http://onschallenge.wikispaces.com/file/view/AqueousDataset002.xlsx/351826032/AqueousDa
Liquid + liquid equilibria of [C8mim][Ntf2] ionic liquid with a	https://www.doi.org/10.1016/j.jct.2007.06.016
Evaluation of the polysubstituted sulfur component and hydrocarbons: pyridinium ionic liquid [hmmpy][Ntf2]	https://www.doi.org/10.1016/j.jct.2010.01.005
Infinite dilution activity coefficient measurements by inert gas stripping	https://www.doi.org/10.1016/j.fluid.2006.02.022
Ternary liquid-liquid phase equilibria of {ionic liquid + thiophene +	https://www.doi.org/10.1016/j.jct.2019.03.017
Vapor Pressure Measurements for Binary Mixtures Containing Ionic Liquid	https://www.doi.org/10.1021/acs.jced.5b00760
Effective extraction of benzene and thiophene from model diesel using	https://www.doi.org/10.1016/j.fluid.2018.11.025
Interactions of volatile organic compounds with the ionic liquids:	https://www.doi.org/10.1016/j.jct.2011.09.028
Measurements of Activity Coefficients at Infinite Dilution for Organic Solutes	https://www.doi.org/10.1021/je101008y
Liquid-liquid equilibria of bis(trifluoromethylsulfonyl) amide	https://www.doi.org/10.1016/j.fluid.2012.02.019
Measurements of activity coefficients at infinite dilution of organic	https://www.doi.org/10.1016/j.jct.2010.10.026
Liquid-Liquid Equilibria of Ternary Systems Sulfolane + Octane + Solvents at	https://www.doi.org/10.1021/je800340v
Ammonium ionic liquids in extraction of bio-butan-1-ol from water phase	https://www.doi.org/10.1016/j.fluid.2018.09.024
High selective water/butan-1-ol separation on investigation of limiting	https://www.doi.org/10.1016/j.fluid.2017.06.001
Activity coefficients at infinite dilution measurements for organic solutes and	https://www.doi.org/10.1016/j.jct.2009.06.011
Measurement and Correlation of Liquid-Liquid Equilibria of Two	https://www.doi.org/10.1021/je700362q
Solvent extraction of thiophene from n-alkanes (C7–C12 and C16) using the	https://www.doi.org/10.1016/j.jct.2008.01.025
Thermodynamics and activity coefficients at infinite dilution for organic solutes	https://www.doi.org/10.1021/je200637v
Compounds in Four New	https://www.doi.org/10.1016/j.jct.2014.04.024
Compressed liquid densities and excess volumes of CO2 + thiophene	https://www.doi.org/10.1016/j.fluid.2005.07.017
Ternary liquid-liquid equilibria of bis(trifluoromethylsulfonyl)imide +	https://www.doi.org/10.1016/j.jct.2010.05.017
Separation of aliphatic from aromatic hydrocarbons and sulphur compounds	https://www.doi.org/10.1016/j.jct.2016.07.017
Thiophene separation from aliphatic hydrocarbons using ionic liquids	https://www.doi.org/10.1016/j.fluid.2008.06.012
Methods: Activity coefficients at infinite dilution for organic solutes and water in the ionic liquid: N,N-diethyl-N-methyl-N-(2-methoxy-ethyl)ammonium bis(trifluoromethylsulfonyl)imide:	http://link.springer.com/article/10.1007/BF02311772

Isobaric vapor-liquid equilibrium for four binary systems of thiophene:	https://www.doi.org/10.1016/j.fluid.2011.11.020
Volumetric, acoustic, and refractometric properties of (thiophene + n-hexane/cyclohexane) solutions in the presence of some imidazolium based ionic liquids at 298.15 K:	https://www.doi.org/10.1016/j.jct.2015.03.004
Infinite dilution activity coefficients of volatile organic compounds in two ionic liquids 1-methyl-3-octylimidazolium tris(pentafluoroethyl)trifluorophosphate ([FAP]) anion and a composed by 1-methyl-3-octylimidazolium tetrafluoroborate cation:	https://www.doi.org/10.1016/j.jct.2013.05.035
Measurements of activity coefficients at infinite dilution for organic solutes in the ionic liquid 1-methyl-3-octylimidazolium methanesulfonate:	https://www.doi.org/10.1016/j.jct.2012.01.026
Separation of binary mixtures thiophene and n-hexane or benzene/n-hexane using ionic liquids 1-ethyl-3-methylimidazolium methanesulfonate:	https://www.doi.org/10.1021/je700126z
Activity Coefficients at Infinite Dilution of Organic Compounds in Ethylbenzene/Styrene based on limiting activity coefficients:	https://www.doi.org/10.1016/j.jct.2012.03.005
Isobaric vapor-liquid equilibrium and interfacial tension of the ternary system heptane + thiophene + 1-methyl-3-octylimidazolium bis(trifluoromethylsulfonyl)imide:	https://www.doi.org/10.1016/j.jct.2017.03.004
Vapor-Liquid Equilibrium for Binary Systems of Thiophene + n-hexane at 343.15 and 323.15 K:	https://www.doi.org/10.1021/je800754w
Solvent Effects Alcohol on thiophene + 1-hexene at 333.15 and 323.15 K:	https://www.doi.org/10.1016/j.fluid.2010.08.008
Cyano-functionalized ionic liquids using inverse gas chromatography:	https://www.doi.org/10.1021/je0603022
Activity coefficients at infinite dilution measurements for organic solutes and water in one ionic liquid 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate using GLC:	https://www.doi.org/10.1021/je900838a
Activity coefficients at infinite dilution for organic solutes and water in the ionic liquids Bmimpy Bmim Emim Hmim Omim Emim Bmim Hmim Omim Short Linear Alkyl Side Chains of Three to Five Carbons:	https://www.doi.org/10.1016/j.fluid.2009.01.011
Separation of (water/butan-1-ol) binary systems based on activity coefficients at infinite dilution with phosphonium ionic liquid:	https://www.doi.org/10.1021/je4001894
Separation of benzene and thiophene with a mixture of N-methyl-2-pyrrolidinone (NMP) and ionic liquid as the entrainer:	https://www.doi.org/10.1016/j.jct.2015.05.014
Effect of cation alkyl chain length on liquid/liquid equilibria of {ionic liquids + thiophene + heptane}: COSMO-RS and experimental:	https://www.doi.org/10.1016/j.jct.2019.05.011
Phase behaviour of ionic liquid 1-methyl-3-octylimidazolium tris(pentafluoroethyl)trifluorophosphate with alcohols, water and aromatic hydrocarbons:	https://www.doi.org/10.1016/j.jct.2018.07.024
Solubilization in the Novel Ionic Liquids at Infinite Dilution by Gas Chromatography:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Partition measurements for organic solutes and water in the ionic liquid 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate:	https://www.doi.org/10.1016/j.fluid.2011.05.018
Activity coefficients at infinite dilution measurements for organic solutes and water in the ionic liquid 1-butyl-1-methylpyrrolidinium tetracyanoborate ionic liquid with molecular compounds:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1864
Solvent extraction of aromatic sulfur compounds from n-heptane using the 1-ethyl-3-methylimidazolium dicyanomethanide ionic liquids:	https://www.doi.org/10.1016/j.jct.2013.05.048
New ionic liquid [P14,1,1,1][NTf2] in bis-butanol extraction: an investigation of limiting activity coefficients:	https://www.doi.org/10.1016/j.fluid.2018.07.028
Measurements of activity coefficients at infinite dilution for organic solutes and water in the ionic liquid 1-butyl-1-methylpyrrolidinium trifluoromethanide:	https://www.doi.org/10.1016/j.jct.2013.07.004
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Infinite Dilution Activity Coefficients of Solutes Dissolved in Two Ionic Liquids:	https://www.doi.org/10.1016/j.fluid.2015.01.005
Effect of tetradecyltrihexylphosphonium ionic liquid/liquid equilibria of {ionic liquids + thiophene + heptane}: COSMO-RS and experimental:	https://www.doi.org/10.1021/je500050p
Tetramethylammonium chloride + glycerol deep eutectic solvent as versatile diluent for organic liquid mixtures: Assessment from experimental limiting activity coefficients:	https://www.doi.org/10.1016/j.fluid.2016.06.016
Vapor-Liquid Equilibrium for Binary Systems of Thiophene with Alkanes and Aromatic Hydrocarbons:	https://www.doi.org/10.1016/j.fluid.2018.06.003
The influence of n-alkane chain length on vapor liquid equilibrium for systems containing sulfur compounds:	https://www.doi.org/10.1016/j.fluid.2007.10.010
Vapor liquid equilibrium for binary system of thiophene + 2,2,4-trimethylpentane at 343.15 and 353.15 K:	https://www.doi.org/10.1021/je060093l
Phase behaviour of ionic liquid 1-butyl-1-methylpyrrolidinium bis(trifluoromethylsulfonyl)imide + thiophene + 2-ethoxy-2-methylpropane at 333.15 K:	https://www.doi.org/10.1016/j.fluid.2013.05.019
Solubilities of the Gaseous and Liquid Solutes and Their Thermodynamics of Solubilization in the Novel Ionic Liquids at Infinite Dilution by Gas Chromatography:	https://www.doi.org/10.1016/j.fluid.2007.06.010
Partition measurements for organic solutes and water in the ionic liquid 1-butyl-1-methylpyrrolidinium dicyanomethanide:	https://www.doi.org/10.1016/j.fluid.2013.01.027
Activity coefficients at infinite dilution measurements for organic solutes and 1,3-dimethylimidazolium bis(trifluoromethylsulfonyl)imide ionic liquids The cation influence:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C110021&Units=SI
Measurements and equation-of-state modelling of thermodynamic properties of binary mixtures of 1-butyl-3-methylimidazolium methyl sulfate with alcohols:	https://www.doi.org/10.1021/je700297c
Activity Coefficients at Infinite Dilution Measurements for Organic Solutes and Water in the Ionic Liquids 1-butyl-1-methylpyrrolidinium tetracyanoborate and 1-ethyl-3-methylimidazolium tetracyanoborate:	https://www.doi.org/10.1021/je1000582
Thermodynamics and activity coefficients at infinite dilution for organic solutes and water in the ionic liquid 1-butyl-1-methylpyrrolidinium dicyanomethanide:	https://www.doi.org/10.1016/j.jct.2013.08.030
Activity coefficients at infinite dilution measurements for organic solutes and water in the ionic liquid 1-ethyl-3-methylimidazolium tetracyanoborate:	https://www.doi.org/10.1016/j.jct.2014.04.010
Effect of the Type of Ammonium Salt on Extractive Desulfurization of Estimated Solubility Method:	https://www.doi.org/10.1016/j.fluid.2009.08.017
Liquid Liquid Equilibria for the Ternary Systems Dodecane + Toluene or Thiophene or Pyridine:	https://www.doi.org/10.1021/acs.jced.7b00832
Extraction desulfurization process of sulfur mixtures of fuels with ionic liquids:	https://www.doi.org/10.1016/j.jct.2015.06.004
	https://www.doi.org/10.1016/j.jct.2014.04.025
	http://pubs.acs.org/doi/suppl/10.1021/ci034243x/suppl_file/ci034243xsi20040112_053635.txt

Experimental and theoretical study of interaction between organic compounds and 2-methoxyethyl-1-methylpyrrolidinium dicyanamide ionic liquid for various phase separation processes:	https://www.doi.org/10.1016/j.fluid.2014.06.021
Thermodynamic behavior of thiophene with octane, 1-butanol, 1-methylimidazolium tetracyanoborate at 298.15 K:	https://www.doi.org/10.1016/j.jct.2015.12.031
Activity coefficients at infinite dilution of organic solutes in 1-methylimidazolium based ionic liquids:	https://www.doi.org/10.1016/j.jct.2015.02.023
Activity coefficients at infinite dilution of organic solutes in 1-ethyl-3-methylimidazolium methylsulfonate based ionic liquids:	https://www.doi.org/10.1016/j.fluid.2019.03.023
Activity coefficients at infinite dilution measurements for organic solutes and water in the ionic liquid 1-ethyl-3-methylimidazolium tetracyanoborate:	https://www.doi.org/10.1016/j.jct.2012.08.016
Measurements of activity coefficients at infinite dilution for organic solutes and water in the ionic liquid 1-ethyl-3-methylimidazolium tetracyanoborate:	https://www.doi.org/10.1016/j.jct.2011.11.025
Activity coefficients at infinite dilution measurements for organic solutes and water in the ionic liquid 1-ethyl-3-methylimidazolium tetracyanoborate:	https://www.doi.org/10.1016/j.jct.2011.02.012
KDBx in the ionic liquid 1-ethyl-3-methylimidazolium tetracyanoborate:	https://www.cheric.org/files/research/kdb/mol/mol1864.mol
Experimental and theoretically study of interaction between organic compounds and tricyanomethanide ionic liquid:	https://www.doi.org/10.1016/j.jct.2014.12.027
Activity Coefficients at Infinite Dilution of Organic Solutes and Water in Tributylethylphosphonium Diethylphosphate Using Gas−Liquid Chromatography. Thermodynamic Properties of Mixtures Containing Ionic Liquids:	https://www.doi.org/10.1021/acs.jced.5b00980
Separation of water/butan-1-ol based on activity coefficients at infinite dilution using ionic liquids:	https://www.doi.org/10.1016/j.jct.2017.10.003
Liquid-liquid equilibrium data for six ternary systems containing 1-butanol + thiophene + ionic liquids:	https://www.doi.org/10.1016/j.fluid.2015.12.006
Thermodynamic Properties of Mixtures Containing Ionic Liquids: Hexane and Thiophene at 25 C:	https://www.doi.org/10.1016/j.jct.2014.12.005
Vapor−Liquid Equilibrium for Thiophene + Butane, + trans-But-2-ene, + 2-Methylpropane, and + Tetrahydrofuran Systems Comprising an (ionic liquid + hydrocarbon):	https://www.doi.org/10.1021/je101343m
Measurement of activity coefficients at infinite dilution in ionic liquid 1-(2-methoxyethyl)-1-methylpyrrolidinium tricyanomethanide using gas−liquid chromatography:	https://www.doi.org/10.1016/j.jct.2012.03.015
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 1-(2-methoxyethyl)-1-methylpyrrolidinium tricyanomethanide based ionic liquids:	https://www.doi.org/10.1016/j.jct.2007.01.004
Separation of binary mixtures based on activity coefficients at infinite dilution using 1-ethyl-3-methylimidazolium methylsulfonate ionic liquid:	https://www.doi.org/10.1016/j.fluid.2017.12.029
Activity coefficients at infinite dilution and physicochemical properties for organic solutes and water in the ionic liquid 1-ethyl-3-methylimidazolium tricyanomethanide based ionic liquids:	https://www.doi.org/10.1016/j.jct.2013.01.007
Phase behaviour of 1-methylimidazolium based ionic liquids with aromatic hydrocarbons:	https://www.doi.org/10.1016/j.fluid.2014.12.003
Thermodynamic study of molecular interaction selectivity in separation processes based on infinite activity coefficients:	https://www.doi.org/10.1016/j.jct.2018.02.014
Tributylmethylammonium bis(trifluoromethylsulfonyl)imide: Liquid-liquid extraction of sulfur compounds from heptane with tricyanomethanide based ionic liquids:	https://www.doi.org/10.1016/j.jct.2016.08.005
Desulfurization of fuel oils with [C2mim][NTf2]: A comparative study:	https://www.doi.org/10.1016/j.jct.2018.10.009
	https://www.doi.org/10.1016/j.jct.2012.08.031

Legend

af:	Acentric Factor
affp:	Proton affinity
basg:	Gas basicity
dm:	Dipole Moment
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hsubt:	Enthalpy of sublimation 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
nfpah:	NFPA Health Rating
pc:	Critical Pressure
pvap:	Vapor pressure
rfi:	Refractive Index
rhol:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
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

Latest version available from:

https://www.chemeo.com/cid/41-251-7/Thiophene.pdf

Generated by Cheméo on 2024-04-29 01:44:25.397193548 +0000 UTC m=+16644314.317770857.

Cheméo (https://www.chemeo.com) is the biggest free database of chemical and physical data for the process industry.