Thiophene, tetrahydro-, 1,1-dioxide

Other names:	1,1-Dioxide tetrahydrothiofuran
	1,1-Dioxidetetrahydrothiophene
	1,1-Dioxothiolan
	2,3,4,5-Tetrahydrothiophene-1,1-dioxide
	BONDELANE A
	Bondolane A
	CYCLIC TETRAMETHYLENE SULFONE
	Cyclotetramethylene sulfone
	Dihydrobutadiene sulfone
	Dihydrobutadiene sulphone
	Dioxothiolan
	NSC 46443
	Sulfalone
	Sulfolan
	Sulfolane
	Sulpholane
	Sulphoxaline
	TETRAHYDROTHIOPHENE DIOXIDE
	Tetrahydothiophene-1,1-dioxide
	Tetrahydrothiofen-1,1-dioxid
	Tetrahydrothiophene 1,1-dioxide
	Tetramethylene sulfone
	Thiacyclopentane dioxide
	Thiocyclopentane-1,1-dioxide
	Thiolane-1,1-dioxide
	Thiophan sulfone
	Thiophane 1,1-dioxide
	Thiophane dioxide
	Thiophene, 1,1-dioxide-tetrahydro-
	thiolane 1,1-dioxide
Inchi:	InChI=1S/C4H8O2S/c5-7(6)3-1-2-4-7/h1-4H2
InchiKey:	HXJUTPCZVOIRIF-UHFFFAOYSA-N
Formula:	C4H8O2S
SMILES:	O=S1(=O)CCCC1
Mol. weight [g/mol]:	120.17
CAS:	126-33-0

Physical Properties

Property code	Value	Unit	Source
gf	-434.74	kJ/mol	Joback Method
hf	-495.03	kJ/mol	Joback Method
hfus	9.88	kJ/mol	Joback Method
hvap	42.69	kJ/mol	Joback Method
log10ws	-0.23		Crippen Method
logp	0.195		Crippen Method
mcvol	84.450	ml/mol	McGowan Method
nfpaf	%!d(float64=1)		KDB
nfpah	%!d(float64=2)		KDB
pc	6328.92	kPa	Joback Method
tb	560.48	K	Isobaric (vapour + liquid) equilibria for sulfolane with toluene, ethylbenzene, and isopropylbenzene at 101.33 kPa
tc	521.90	K	Joback Method
tf	237.59	K	Joback Method
vc	0.320	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	189.37	J/mol×K	521.90	Joback Method
cpg	180.77	J/mol×K	491.20	Joback Method
cpg	171.68	J/mol×K	460.50	Joback Method
cpg	162.09	J/mol×K	429.80	Joback Method
cpg	151.99	J/mol×K	399.10	Joback Method
cpg	141.38	J/mol×K	368.40	Joback Method
cpg	130.22	J/mol×K	337.70	Joback Method
cpl	189.00	J/mol×K	328.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K

cpl	191.00	J/mol×K	333.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	193.00	J/mol×K	338.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	194.00	J/mol×K	343.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	197.00	J/mol×K	348.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	199.00	J/mol×K	353.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	192.30	J/mol×K	355.09	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide

cpl	185.00	J/mol×K	313.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	179.50	J/mol×K	304.04	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	179.90	J/mol×K	304.04	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	181.30	J/mol×K	309.14	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	181.60	J/mol×K	309.15	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	182.60	J/mol×K	314.25	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	183.80	J/mol×K	314.25	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	184.70	J/mol×K	319.35	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	184.50	J/mol×K	319.35	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide

cpl	185.30	J/mol×K	324.46	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	188.00	J/mol×K	323.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	187.40	J/mol×K	329.56	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	186.60	J/mol×K	329.56	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	188.70	J/mol×K	334.66	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	187.90	J/mol×K	334.67	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	189.70	J/mol×K	339.77	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	188.50	J/mol×K	339.77	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	190.20	J/mol×K	344.88	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide

cpl	190.20	J/mol×K	344.88	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	192.50	J/mol×K	349.98	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	192.00	J/mol×K	349.98	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	193.40	J/mol×K	355.09	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide
cpl	186.00	J/mol×K	318.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	181.50	J/mol×K	303.15	Heat Capacity, Thermal Conductivity and Thermal Diffusivity of Aqueous Sulfolane Solutions
cpl	185.10	J/mol×K	313.15	Heat Capacity, Thermal Conductivity and Thermal Diffusivity of Aqueous Sulfolane Solutions
cpl	188.70	J/mol×K	323.15	Heat Capacity, Thermal Conductivity and Thermal Diffusivity of Aqueous Sulfolane Solutions

cpl	192.30	J/mol×K	333.15	Heat Capacity, Thermal Conductivity and Thermal Diffusivity of Aqueous Sulfolane Solutions
cpl	194.30	J/mol×K	343.15	Heat Capacity, Thermal Conductivity and Thermal Diffusivity of Aqueous Sulfolane Solutions
cpl	197.80	J/mol×K	353.15	Heat Capacity, Thermal Conductivity and Thermal Diffusivity of Aqueous Sulfolane Solutions
cpl	182.42	J/mol×K	308.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	183.50	J/mol×K	312.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	184.70	J/mol×K	316.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	185.90	J/mol×K	320.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	187.11	J/mol×K	324.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	188.79	J/mol×K	328.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	190.47	J/mol×K	332.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	192.39	J/mol×K	336.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	194.32	J/mol×K	340.20	Thermal Properties of Cyano-Based Ionic Liquids

cpl	196.36	J/mol×K	344.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	198.52	J/mol×K	348.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	200.81	J/mol×K	352.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	203.21	J/mol×K	356.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	205.73	J/mol×K	360.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	208.26	J/mol×K	364.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	210.90	J/mol×K	368.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	213.66	J/mol×K	372.20	Thermal Properties of Cyano-Based Ionic Liquids
cpl	182.00	J/mol×K	303.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	184.00	J/mol×K	308.15	Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K
cpl	184.40	J/mol×K	324.46	Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide

dvisc	0.0078080	Pa×s	313.15	Densities and Viscosities of Binary Mixtures of Ethylbenzene + N-Methyl-2-pyrrolidone, Ethylbenzene + Sulfolane, and Styrene + Octane from (303.15 to 353.15) K and Atmospheric Pressure
dvisc	0.0100700	Pa×s	303.15	Densities and Viscosities of Binary Mixtures of Ethylbenzene + N-Methyl-2-pyrrolidone, Ethylbenzene + Sulfolane, and Styrene + Octane from (303.15 to 353.15) K and Atmospheric Pressure
dvisc	0.0061940	Pa×s	323.15	Densities and Viscosities of Binary Mixtures of Ethylbenzene + N-Methyl-2-pyrrolidone, Ethylbenzene + Sulfolane, and Styrene + Octane from (303.15 to 353.15) K and Atmospheric Pressure
dvisc	0.0050090	Pa×s	333.15	Densities and Viscosities of Binary Mixtures of Ethylbenzene + N-Methyl-2-pyrrolidone, Ethylbenzene + Sulfolane, and Styrene + Octane from (303.15 to 353.15) K and Atmospheric Pressure
dvisc	0.0041260	Pa×s	343.15	Densities and Viscosities of Binary Mixtures of Ethylbenzene + N-Methyl-2-pyrrolidone, Ethylbenzene + Sulfolane, and Styrene + Octane from (303.15 to 353.15) K and Atmospheric Pressure

dvisc	0.0034400	Pa×s	353.15	Densities and Viscosities of Binary Mixtures of Ethylbenzene + N-Methyl-2-pyrrolidone, Ethylbenzene + Sulfolane, and Styrene + Octane from (303.15 to 353.15) K and Atmospheric Pressure
dvisc	0.0100304	Pa×s	303.15	Densities, Viscosities, and Speeds of Sound of Binary Liquid Mixtures of Sulfolane with Ethyl Acetate, n-Propyl Acetate, and n-Butyl Acetate at Temperature of (303.15, 308.15, and 313.15) K
dvisc	0.0087947	Pa×s	308.15	Densities, Viscosities, and Speeds of Sound of Binary Liquid Mixtures of Sulfolane with Ethyl Acetate, n-Propyl Acetate, and n-Butyl Acetate at Temperature of (303.15, 308.15, and 313.15) K
dvisc	0.0102280	Pa×s	303.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0078365	Pa×s	313.15	Densities, Viscosities, and Speeds of Sound of Binary Liquid Mixtures of Sulfolane with Ethyl Acetate, n-Propyl Acetate, and n-Butyl Acetate at Temperature of (303.15, 308.15, and 313.15) K

dvisc	0.0078440	Pa×s	313.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0065740	Pa×s	318.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0061750	Pa×s	323.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0051910	Pa×s	328.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0048870	Pa×s	333.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K

dvisc	0.0043100	Pa×s	338.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0042140	Pa×s	343.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0035310	Pa×s	353.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0030110	Pa×s	363.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0025760	Pa×s	373.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K

dvisc	0.0022530	Pa×s	383.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0019870	Pa×s	393.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0017610	Pa×s	403.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0015710	Pa×s	413.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
dvisc	0.0014150	Pa×s	423.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K

dvisc	0.0091940	Pa×s	308.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation	
dvisc	0.0081160	Pa×s	313.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation	
dvisc	0.0072010	Pa×s	318.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation	
dvisc	0.0064390	Pa×s	323.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation	
dvisc	0.0057720	Pa×s	328.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation	
dvisc	0.0051990	Pa×s	333.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation	
dvisc	0.0047140	Pa×s	338.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation	

dvisc	0.0042680	Pa×s	343.20	Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane. Experimental data and correlation
dvisc	0.0100742	Pa×s	303.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Sulfolane with Benzene, Toluene, Ethylbenzene, p-Xylene, o-Xylene, and m-Xylene at 303.15 and 323.15 K and Atmospheric Pressure
dvisc	0.0061936	Pa×s	323.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Sulfolane with Benzene, Toluene, Ethylbenzene, p-Xylene, o-Xylene, and m-Xylene at 303.15 and 323.15 K and Atmospheric Pressure
dvisc	0.0090460	Pa×s	308.15	Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303 373 K
pvap	829.20	kPa	685.10	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method

pvap	0.04	kPa	353.15	Vapor liquid equilibria and density measurement for binary mixtures of toluene, benzene, o-xylene, m-xylene, sulfolane and nonane at 333.15K and 353.15K	
pvap	350.20	kPa	626.30	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
pvap	203.90	kPa	594.40	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
pvap	4144.00	kPa	829.00	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
pvap	103.60	kPa	560.20	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
pvap	3185.00	kPa	802.70	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
pvap	2363.00	kPa	773.40	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	

pvap	0.01	kPa	333.15	Vapor liquid equilibria and density measurement for binary mixtures of toluene, benzene, o-xylene, m-xylene, sulfolane and nonane at 333.15K and 353.15K	
pvap	1665.00	kPa	742.00	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
pvap	1181.00	kPa	713.20	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
pvap	556.80	kPa	656.30	Critical Point and Vapor Pressure Measurements for 17 Compounds by a Low Residence Time Flow Method	
rfi	1.48230		303.15	Phase equilibria measurements of ternary mixtures (sulfolane + a carboxylic acid + pentane) at 303.15 K	
rfi	1.48150		303.15	(Liquid + liquid) equilibria measurements for ternary systems (sulfolane + a carboxylic acid + n-heptane) at T = 303.15 K and at 0.1 MPa	

rhol	1226.00	kg/m3	343.15	Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S)
rhol	1266.40	kg/m3	298.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS
rhol	1228.10	kg/m3	343.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhol	1215.00	kg/m3	353.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS
rhol	1206.00	kg/m3	363.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS

rhol	1262.90	kg/m3	303.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhol	1254.10	kg/m3	313.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhol	1245.20	kg/m3	323.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhol	1265.75	kg/m3	303.15	Measurement of phase equilibria data for the extraction of toluene from alkane using different solvents
rhol	1235.40	kg/m3	333.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS
rhol	1253.00	kg/m3	313.15	Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S)

rhol	1244.00	kg/m3	323.15	Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S)
rhol	1235.00	kg/m3	333.15	Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S)
rhol	1236.60	kg/m3	333.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhol	1218.00	kg/m3	353.15	Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S)
rhol	1209.00	kg/m3	363.15	Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S)

rhol	1260.10	kg/m3	303.15	Volumetric and transport properties of binary liquid mixtures of sulfolane with aniline, N,N-dimethylaniline and N,N-diethylaniline at different temperatures and atmospheric pressure
rhol	1255.70	kg/m3	308.15	Volumetric and transport properties of binary liquid mixtures of sulfolane with aniline, N,N-dimethylaniline and N,N-diethylaniline at different temperatures and atmospheric pressure
rhol	1251.30	kg/m3	313.15	Volumetric and transport properties of binary liquid mixtures of sulfolane with aniline, N,N-dimethylaniline and N,N-diethylaniline at different temperatures and atmospheric pressure
rhol	1259.40	kg/m3	303.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS
rhol	1251.70	kg/m3	313.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS

rhol	1244.00	kg/m3	323.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS
rhol	1262.00	kg/m3	303.15	Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S)
rhol	1225.00	kg/m3	343.15	Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS
speedsl	1576.00	m/s	308.15	Densities and Speeds of Sound for Binary Liquid Mixtures of Thiolane-l,l-dioxide with Butanone, Pentan-2-one, Pentan-3-one, and 4-Methyl-pentan-2-one at T = (303.15 or 308.15 or 313.15) K
speedsl	1558.00	m/s	313.15	Densities and Speeds of Sound for Binary Liquid Mixtures of Thiolane-l,l-dioxide with Butanone, Pentan-2-one, Pentan-3-one, and 4-Methyl-pentan-2-one at T = (303.15 or 308.15 or 313.15) K

speedsl	1588.00	m/s	303.15	Densities and Speeds of Sound for Binary Liquid Mixtures of Thiolane-l,l-dioxide with Butanone, Pentan-2-one, Pentan-3-one, and 4-Methyl-pentan-2-one at T = (303.15 or 308.15 or 313.15) K
srf	0.05	N/m	303.15	Densities, Viscosities, and Surface Tensions of Aqueous Mixtures of Sulfolane + Triethanolamine and Sulfolane + Diisopropanolamine
srf	0.05	N/m	313.15	Densities, Viscosities, and Surface Tensions of Aqueous Mixtures of Sulfolane + Triethanolamine and Sulfolane + Diisopropanolamine
srf	0.05	N/m	323.15	Densities, Viscosities, and Surface Tensions of Aqueous Mixtures of Sulfolane + Triethanolamine and Sulfolane + Diisopropanolamine
srf	0.05	N/m	333.15	Densities, Viscosities, and Surface Tensions of Aqueous Mixtures of Sulfolane + Triethanolamine and Sulfolane + Diisopropanolamine
srf	0.05	N/m	343.15	Densities, Viscosities, and Surface Tensions of Aqueous Mixtures of Sulfolane + Triethanolamine and Sulfolane + Diisopropanolamine

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.51896e+01
Coeff. B	-5.14444e+03
Coeff. C	-7.13560e+01
Temperature range (K), min.	416.57
Temperature range (K), max.	592.15

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	1.04677e+02
Coeff. B	-1.21143e+04
Coeff. C	-1.26025e+01
Coeff. D	4.33097e-06
Temperature range (K), min.	300.75
Temperature range (K), max.	849.00

Sources

Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Liquid + liquid equilibria for ternary mixtures of (solvent + aromatic hydrocarbon + alkane):	https://www.doi.org/10.1016/j.jct.2005.01.016
Liquid-Liquid Equilibria of Alkane (C10-C14) + Hexylbenzene + Sulfolane:	https://www.doi.org/10.1021/je7000123
(Liquid + liquid) equilibria of ternary and quaternary systems containing n-hexane, toluene, m-xylene, propanol, sulfolane, and water at T = 303.15 K:	https://www.doi.org/10.1016/j.jct.2006.12.008
Measuring the solubility of CO2 and H2S in sulfolane and the density and viscosity of saturated liquid binary mixtures of (sulfolane + CO2) and (sulfolane + H2S):	https://www.doi.org/10.1016/j.jct.2015.01.001
Carbon dioxide solubility in aqueous sulfolane solution:	https://www.doi.org/10.1016/j.jct.2018.12.004
Liquid Liquid Equilibria of the Ternary Systems Undecane + 1,4-Diethylbenzene + Tetrahydrothiophene 1,1-Dioxide and Tridecane + 1,4-Diethylbenzene + Tetrahydrothiophene 1,1-Dioxide at T = (323.15, 348.15, and 373.15) K:	https://www.doi.org/10.1021/je200465z
Isobaric (vapour + liquid) equilibria for sulfolane with toluene, ethylbenzene and isopropylbenzene at 101.33 kPa:	https://www.doi.org/10.1016/j.jct.2011.06.015
Volumetric and transport properties of binary liquid mixtures of sulfolane with aniline, N,N-dimethylaniline and N,N-diethylamine at different temperatures and atmospheric pressure:	https://www.doi.org/10.1016/j.jct.2015.12.030
Liquid–Liquid Extraction of Toluene from n-Alkanes using {[4empy][Tf2N] + [emim][DCA]} Ionic Liquid Mixtures:	https://www.doi.org/10.1021/je5001439
Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures:	https://www.doi.org/10.1021/je500153g
Densities, Viscosities, and Surface Tensions of Aqueous Mixtures of Sulfolane + Triethanolamine and Sulfolane + Diisopropanolamine:	https://www.doi.org/10.1021/je200124h
KDB Pure (Korean Thermophysical Properties Databank):	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1868
Isobaric Low-Pressure Vapor Liquid Equilibrium Data for Ethylbenzene + Styrene + Sulfolane and the Three Constituent Binary Systems :	https://www.doi.org/10.1021/je200098d
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C126330&Units=SI

Phase equilibria measurements of ternary mixtures (sulfolane + a carboxylic acid + pentane) at 303.15 K: https://www.doi.org/10.1016/j.fluid.2015.06.029

Measurement of Activity Coefficient at Infinite Dilution of Hydrocarbons in Sulfolane Using Gas-Liquid Chromatography: https://www.doi.org/10.1021/je700139p

Liquid-Liquid Equilibria of Ternary Systems Sulfide + Octane + Solvents at Different Temperatures: https://www.doi.org/10.1021/je800340v

Heat Capacity, Thermal Conductivity and Thermal Diffusivity of Aqueous Sulfolane Solutions: https://www.doi.org/10.1016/j.tca.2013.03.017

Isothermal Vapor-Liquid Equilibrium and Excess Enthalpy Data for the Binary Systems Water + Sulfolane and Methanol + N-Methyl-2-pyrrolidone (NMP): https://www.doi.org/10.1021/je034254m

Experimental Solubility of Carbonyl Sulfide in Sulfolane and gamma-Butyrolactone: https://www.doi.org/10.1021/acs.jced.7b00428

Simultaneous solubility measurement of (ethyl mercaptan + carbon dioxide) into the aqueous solutions of (N-methyl diethanolamine + sulfolane + water): https://www.doi.org/10.1016/j.jct.2019.02.003

Molar Heat Capacity of Aqueous Sulfolane, 4-Formylmorpholine, 1-Methyl-2-pyrrolidinone, and Triethylene Glycol Dimethyl Ether Solutions from (303.15 to 353.15) K: https://www.doi.org/10.1021/je800999s

Experimental densities and viscosities of binary mixture of 1-butyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide or glycerol with sulfolane and their molecular interaction by COSMO-RS: https://www.doi.org/10.1016/j.tca.2016.07.005

Solubility of dibenzothiophene in nine organic solvents: Experimental measurement and thermodynamic modelling: https://www.doi.org/10.1016/j.jct.2018.09.017

Phase equilibria study on bromide-based ionic liquids with glycols and sulfolane: Experimental data and correlation: https://www.doi.org/10.1016/j.jct.2018.03.011

Vapor-Liquid Equilibria and Density Measurement for Binary Mixtures of Benzene + Nonane, Methylbenzene + 1,2-Dimethylbenzene, 1,3-Dimethylbenzene + 2,3,4,5-Tetrahydrothiophene-1,1-dioxide (Sulfolane), 1,2-Dimethylbenzene + ...: https://www.doi.org/10.1021/je100517z

Densities, Viscosities, and Speeds of Sound of Binary Liquid Mixtures of Sulfolane with Ethyl Acetate, n-Propyl Acetate, and n-Butyl Acetate at Temperatures from (303.15 to 323.15) K: https://www.doi.org/10.1021/je800653d

Excess Molar Volumes and Viscosities of Binary Mixtures of Sulfolane with Benzene, Toluene, Ethylbenzene, p-Xylene, o-Xylene, and m-Xylene at 303.15 K: https://www.doi.org/10.1021/je0341920

Ternary liquid-liquid equilibria for mixtures of toluene + n-heptane + an ionic liquid: https://www.doi.org/10.1016/j.fluid.2006.07.002

Liquid-Liquid Equilibria of Ternary and Six-Component Systems Including Cyclohexane, Benzene, Toluene, Ethylbenzene, Cumene, and Sulfolane at 303.15 K: https://www.doi.org/10.1021/je060153n

... N-Methylformamide (NMF) ... Ethylbenzene + NMF and 1,4-Dimethylbenzene + NMF from (303.15 to 323.15) K at Vacuum Conditions: https://www.doi.org/10.1021/je060269j

Measurements of ... Compounds by a Low Residence Time Flow Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Thermal Properties of Cyano-Based Ionic Liquids: https://www.doi.org/10.1021/je400140n

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

KDB: https://www.cheric.org/files/research/kdb/mol/mol1868.mol

Liquid liquid equilibria for the binary systems of sulfolane with branched cycloalkanes: https://www.doi.org/10.1016/j.fluid.2006.05.008

Viscometric and volumetric behaviour of binary mixtures of sulfolane and N-methylpyrrolidone with monoethanolamine and diethanolamine in the range 303-373 K: https://www.doi.org/10.1016/j.fluid.2008.02.023

Liquid-Liquid Equilibria for Cyclohexane + Ethylbenzene + Sulfolane at (303.15, 313.15, and 323.15) K: https://www.doi.org/10.1021/je050227f

Thermodynamic Modeling and Solubility Measurement of Cetirizine Hydrochloride and Deferiprone in Pure Solvents of Acetonitrile, Ethanol, Acetic Acid, Sulfolane, and Ethyl Acetate and Their Mixtures: https://www.doi.org/10.1021/acs.jced.9b00620

Extraction of benzene, ethylbenzene and xylenes from n-heptane using binary mixtures of [4empy][Tf2N] and sulfolane: https://www.doi.org/10.1016/j.fluid.2014.07.034

Liquid-Liquid Equilibria for the Binary Systems of Sulfolane with Cycloalkanes: https://www.doi.org/10.1021/je0504313

Liquid-Liquid Equilibria of Alkane (C10 C14) + sec-Butylbenzene + Sulfolane: https://www.doi.org/10.1021/je200203k

Experimental investigation of hydrogen sulfide solubility in aqueous sulfolane solution: https://www.doi.org/10.1016/j.jct.2016.11.025

Recommended vapor pressures for thiophene, sulfolane, and dimethyl sulfoxide: https://www.doi.org/10.1016/j.fluid.2011.02.002

(Liquid + liquid) equilibria measurements for ternary systems (sulfolane + a carboxylic acid + n-heptane) at T = 303.15 K and at 0.1 MPa: https://www.doi.org/10.1016/j.jct.2015.12.019

Phase equilibria of toluene/heptane with deep eutectic solvents based on ethyltriphenylphosphonium iodide for the potential use in the separation of aromatics from naphtha: https://www.doi.org/10.1016/j.jct.2013.05.046

Influence of the Temperature on the Liquid-Liquid Equilibria of Heptane + Toluene + Sulfolane and Heptane + m-Xylene + Sulfolane: https://www.doi.org/10.1021/je700611f

KDB Vapor Pressure Data: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1868

Densities and Viscosities of Binary Mixtures of Ethylbenzene + N-Methyl-2-pyrrolidone, Ethylbenzene + Sulfolane, and Styrene + Octane from (303.15 to 353.15) K and Atmospheric Pressure: https://www.doi.org/10.1021/je049572f

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

Measurement of phase equilibria data for the extraction of toluene from alkane using different solvents: https://www.doi.org/10.1016/j.fluid.2015.06.016

(Liquid + liquid) equilibria of (sulfolane + benzene + n-hexane), (N-formylmorpholine + benzene + n-hexane), and (sulfolane + N-formylmorpholine + benzene + n-hexane) at temperatures ranging from (298.15 to 318.15) K: Experimental results and correlation: https://www.doi.org/10.1016/j.jct.2009.10.010

Liquid-Liquid Equilibria for the Binary Systems of Sulfolane with Alkanes: https://www.doi.org/10.1021/je7001607

Vapor liquid equilibria and density measurement for binary mixtures of toluene, benzene, o-xylene, m-xylene, sulfolane and nonane at 333.15 K and 353.15 K: https://www.doi.org/10.1016/j.fluid.2009.09.024

Comparative Study of the Solubilities of SO2 in Five Low Volatile Organic Solvents (Sulfolane, Ethylene Glycol, Propylene Carbonate, N-Methylimidazole, and N-Methylpyrrolidone): https://www.doi.org/10.1021/je4007713

Dortmund Data Bank Vapor-Liquid Equilibrium Data: http://www.ddbst.com/en/EED/VLE/VLE%20Ethanol%3BSulfolane.php

Ternary Liquid-Liquid Equilibria for Systems of (Sulfolane + Toluene or Chloronaphthalene + Octane). https://www.doi.org/10.1021/je0601210

Densities and Speeds of Sound for Binary Liquid Mixtures of Thiolane-l,l-dioxide with Butanone, Pentan-2-one, Pentan-3-one, and 4-Methyl-pentan-2-one at T = (303.15 or 308.15 or 313.15) K: https://www.doi.org/10.1021/je900056u

Legend

cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
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
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