Ethane, 1,2-dimethoxy-

Other names:	1,2-Dimethoxyethane
	1,2-Ethanediol dimethyl ether
	1,2-ethanediol, dimethyl ether
	2,5-Dioxahexane
	Ansul ether 121
	CH3OCH2CH2OCH3
	DIMETHYL CELLOSOLVE
	DME
	DME (glycol ether)
	Dimethoxyethane
	ETHYLENE DIMETHYL ETHER
	Egdme
	Ethylene glycol dimethyl ether
	Glycol dimethyl ether
	Glyme
	Hisolve MMM
	Monoethylene glycol dimethyl ether
	Monoglyme
	NSC 60542
	UN 2252
	dimethylglycol
	«alpha»,«beta»-Dimethoxyethane
	Â«alphaÂ»,Â«betaÂ»-Dimethoxyethane
Inchi:	InChI=1S/C4H10O2/c1-5-3-4-6-2/h3-4H2,1-2H3
InchiKey:	XTHFKEDIFFGKHM-UHFFFAOYSA-N
Formula:	C4H10O2
SMILES:	COCCOC
Mol. weight [g/mol]:	90.12
CAS:	110-71-4

Physical Properties

Property code	Value	Unit	Source
af	0.3580		KDB
affp	846.00 ± 2.00	kJ/mol	NIST Webbook
affp	858.00	kJ/mol	NIST Webbook
basg	820.20	kJ/mol	NIST Webbook

chl	-2623.60 ± 1.50	kJ/mol	NIST Webbook
dm	0.00	debye	KDB
gf	-227.20	kJ/mol	Joback Method
hf	-340.50 ± 0.63	kJ/mol	NIST Webbook
hf	-390.00 ± 2.00	kJ/mol	NIST Webbook
hf	-342.80 ± 0.70	kJ/mol	NIST Webbook
hfl	-376.60 ± 0.20	kJ/mol	NIST Webbook
hfl	-420.00 ± 2.00	kJ/mol	NIST Webbook
hfl	-379.56 ± 0.64	kJ/mol	NIST Webbook
hfus	8.49	kJ/mol	Joback Method
hvap	29.32	kJ/mol	Joback Method
ie	9.30	eV	NIST Webbook
ie	9.20	eV	NIST Webbook
ie	9.30	eV	NIST Webbook
ie	9.78	eV	NIST Webbook
ie	9.90	eV	NIST Webbook
log10ws	0.33		Crippen Method
logp	0.279		Crippen Method
mcvol	78.960	ml/mol	McGowan Method
pc	3960.00 ± 250.00	kPa	NIST Webbook
pc	3870.00	kPa	KDB
pc	3860.00 ± 20.00	kPa	NIST Webbook
pc	3870.00 ± 27.57	kPa	NIST Webbook
rhoc	292.89 ± 11.72	kg/m3	NIST Webbook
rinpol	635.00		NIST Webbook
rinpol	646.00		NIST Webbook
rinpol	646.00		NIST Webbook
rinpol	607.00		NIST Webbook
rinpol	608.00		NIST Webbook
rinpol	645.00		NIST Webbook
rinpol	646.00		NIST Webbook
rinpol	641.00		NIST Webbook
rinpol	641.00		NIST Webbook
rinpol	609.50		NIST Webbook
rinpol	614.50		NIST Webbook
ripol	918.00		NIST Webbook
ripol	935.00		NIST Webbook
ripol	935.00		NIST Webbook
ripol	935.00		NIST Webbook
tb	358.00	K	KDB

tb	357.75	K	Isobaric Vapor-Liquid Equilibrium Data for Two Binary Systems n-Hexane + 1,2-Dimethoxyethane and Methylcyclopentane + 1,2-Dimethoxyethane at 101.3 kPa
tc	539.20 ± 0.50	K	NIST Webbook
tc	536.00	K	KDB
tc	536.00 ± 2.00	K	NIST Webbook
tc	537.00 ± 2.00	K	NIST Webbook
tf	204.15	K	NIST Webbook
tf	215.00	K	KDB
tf	203.41	K	Efficient determination of crystallisation and melting points at low cooling and heating rates with novel computer controlled equipment
tf	203.94 ± 0.10	K	NIST Webbook
vc	0.271	m3/kmol	KDB
vc	0.271 ± 0.005	m3/kmol	NIST Webbook
zc	0.2353310		KDB

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	170.69	J/mol×K	473.45	Joback Method
cpg	137.10	J/mol×K	335.76	Joback Method
cpg	177.10	J/mol×K	500.99	Joback Method
cpg	143.99	J/mol×K	363.30	Joback Method
cpg	150.81	J/mol×K	390.84	Joback Method
cpg	157.53	J/mol×K	418.37	Joback Method
cpg	164.16	J/mol×K	445.91	Joback Method
cpl	189.00	J/mol×K	293.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model

cpl	191.00	J/mol×K	298.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model	
cpl	192.20	J/mol×K	303.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model	
cpl	193.40	J/mol×K	308.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model	
cpl	194.50	J/mol×K	313.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model	
cpl	195.80	J/mol×K	318.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model	
cpl	193.30	J/mol×K	298.15	NIST Webbook	
cpl	188.70	J/mol×K	288.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model	

cpl	196.90	J/mol×K	323.15	Thermophysical properties of dimethyl sulfoxide + cyclic and linear ethers at 308.15K Application of an extended cell model
cpl	191.14	J/mol×K	298.15	NIST Webbook
dvisc	0.0004090	Pa×s	298.15	Viscosity, Density, and Speed of Sound for the Binary Mixtures of Formamide with 2-Methoxyethanol, Acetophenone, Acetonitrile, 1,2-Dimethoxyethane, and Dimethylsulfoxide at Different Temperatures
dvisc	0.0003300	Pa×s	318.15	Viscosity, Density, and Speed of Sound for the Binary Mixtures of Formamide with 2-Methoxyethanol, Acetophenone, Acetonitrile, 1,2-Dimethoxyethane, and Dimethylsulfoxide at Different Temperatures
dvisc	0.0003660	Pa×s	308.15	Viscosity, Density, and Speed of Sound for the Binary Mixtures of Formamide with 2-Methoxyethanol, Acetophenone, Acetonitrile, 1,2-Dimethoxyethane, and Dimethylsulfoxide at Different Temperatures
hvapt	39.40	kJ/mol	268.00	NIST Webbook
hvapt	34.50	kJ/mol	331.00	NIST Webbook
hvapt	32.42	kJ/mol	358.00	NIST Webbook
hvapt	33.90	kJ/mol	295.50	NIST Webbook
hvapt	39.10	kJ/mol	300.50	NIST Webbook

pvap	101.30	kPa	357.75	Isobaric Vapor-Liquid Equilibrium Data for Two Binary Systems n-Hexane + 1,2-Dimethoxyethane and Methylcyclopentane + 1,2-Dimethoxyethane at 101.3 kPa
rfi	1.37220		308.15	Liquid Densities and Refractive Indices of Binary Mixtures for the Dimethyl Ether of a Glycol + Ethanol from T=288.15 K to 318.15 K
rfi	1.37900		298.15	Non-ideal behaviour of a room temperature ionic liquid in an alkoxyethanol or poly ethers at T = (298.15 to 318.15) K
rfi	1.37810		298.15	Bubble Temperature Measurements on Binary Mixtures Formed by Cyclohexane at 94.7 kPa
rfi	1.37830		298.15	Solubility of -Carotene in Binary Solvents Formed by Some Hydrocarbons with Dibutyl Ether and 1,2-Dimethoxyethane
rfi	1.38240		288.15	Liquid Densities and Refractive Indices of Binary Mixtures for the Dimethyl Ether of a Glycol + Ethanol from T=288.15 K to 318.15 K
rfi	1.37720		298.15	Liquid Densities and Refractive Indices of Binary Mixtures for the Dimethyl Ether of a Glycol + Ethanol from T=288.15 K to 318.15 K

rfi	1.36720		318.15	Liquid Densities and Refractive Indices of Binary Mixtures for the Dimethyl Ether of a Glycol + Ethanol from T=288.15 K to 318.15 K
rfi	1.37810		298.15	Bubble temperature measurements on the binary mixtures formed by decane with a variety of compounds at 95.8 kPa
rhol	843.55	kg/m3	314.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	836.77	kg/m3	320.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	835.64	kg/m3	321.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	834.50	kg/m3	322.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	833.36	kg/m3	323.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	832.22	kg/m3	324.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	831.08	kg/m3	325.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	829.93	kg/m3	326.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	828.78	kg/m3	327.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	827.63	kg/m3	328.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	826.48	kg/m3	329.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	825.33	kg/m3	330.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	837.91	kg/m3	319.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	823.02	kg/m3	332.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	821.86	kg/m3	333.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	877.72	kg/m3	283.15	Densities and Viscosities of Three Binary Monoglyme + 1-Alcohol Systems from (283.15 to 313.15) K

rhol	866.71	kg/m3	293.15	Densities and Viscosities of Three Binary Monoglyme + 1-Alcohol Systems from (283.15 to 313.15) K
rhol	861.20	kg/m3	298.15	Densities and Viscosities of Three Binary Monoglyme + 1-Alcohol Systems from (283.15 to 313.15) K
rhol	855.70	kg/m3	303.15	Densities and Viscosities of Three Binary Monoglyme + 1-Alcohol Systems from (283.15 to 313.15) K
rhol	844.69	kg/m3	313.15	Densities and Viscosities of Three Binary Monoglyme + 1-Alcohol Systems from (283.15 to 313.15) K
rhol	839.04	kg/m3	318.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	840.17	kg/m3	317.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	841.29	kg/m3	316.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	842.42	kg/m3	315.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	867.00	kg/m3	293.00	KDB
rhol	861.43	kg/m3	298.15	Standard partial molar volumes of some electrolytes in ethylene carbonate based mixtures
rhol	860.40	kg/m3	298.15	Isobaric Vapor Liquid Equilibrium for the Binary Systems of sec-Butyl Acetate + Methyl Ethyl Ketone, 2-Methoxyethanol, or 1,2-Dimethoxyethane at 101.3 kPa
rhol	850.28	kg/m3	308.50	Excess Molar Enthalpies and Hydrogen Bonding in Binary Mixtures Containing Ethers and Benzyl Alcohol at 308.15 K and Atmospheric Pressure
rhol	877.64	kg/m3	283.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	876.56	kg/m3	284.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	875.48	kg/m3	285.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	874.40	kg/m3	286.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	873.31	kg/m3	287.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	872.23	kg/m3	288.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	871.14	kg/m3	289.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	870.05	kg/m3	290.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	868.96	kg/m3	291.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	867.87	kg/m3	292.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	866.79	kg/m3	293.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	865.70	kg/m3	294.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	864.61	kg/m3	295.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	863.51	kg/m3	296.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	862.42	kg/m3	297.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	861.32	kg/m3	298.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	860.22	kg/m3	299.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	859.12	kg/m3	300.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	858.01	kg/m3	301.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	856.91	kg/m3	302.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	855.80	kg/m3	303.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	854.69	kg/m3	304.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	853.58	kg/m3	305.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	852.46	kg/m3	306.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	851.35	kg/m3	307.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	850.24	kg/m3	308.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

rhol	849.13	kg/m3	309.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	848.02	kg/m3	310.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	846.90	kg/m3	311.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	845.79	kg/m3	312.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	844.67	kg/m3	313.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure
rhol	824.17	kg/m3	331.15	Volumetric Properties of Binary Mixtures of 1,2-Dichloroethane with Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure

srf	0.02	N/m	313.16	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.03	N/m	278.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.03	N/m	283.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.03	N/m	288.18	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	313.15	Excess Molar Volumes and Surface Tensions of Trimethylbenzene + Ethylene Glycol Ester at 298.15 K and 313.15 K
srf	0.02	N/m	298.15	Excess Molar Volumes and Surface Tensions of Trimethylbenzene + Ethylene Glycol Ester at 298.15 K and 313.15 K
srf	0.02	N/m	318.15	Experimental Surface Tensions and Derived Surface Properties of Binary Mixtures of Water + Alkoxyethanols (C1Em, m = 1, 2, 3) and Water + Ethylene Glycol Dimethyl Ether (C1E1C1) at (298.15, 308.15, and 318.15) K

srf	0.02	N/m	308.15	Experimental Surface Tensions and Derived Surface Properties of Binary Mixtures of Water + Alkoxyethanols (C1Em, m = 1, 2, 3) and Water + Ethylene Glycol Dimethyl Ether (C1E1C1) at (298.15, 308.15, and 318.15) K	
srf	0.02	N/m	298.15	Experimental Surface Tensions and Derived Surface Properties of Binary Mixtures of Water + Alkoxyethanols (C1Em, m = 1, 2, 3) and Water + Ethylene Glycol Dimethyl Ether (C1E1C1) at (298.15, 308.15, and 318.15) K	
srf	0.02	N/m	308.15	Excess thermodynamic functions derived from densities and surface tensions of (p- or o-xylene + ethylene glycol dimethyl ether) between the temperatures (298.15 and 308.15) K	
srf	0.02	N/m	303.15	Excess thermodynamic functions derived from densities and surface tensions of (p- or o-xylene + ethylene glycol dimethyl ether) between the temperatures (298.15 and 308.15) K	

srf	0.02	N/m	298.15	Excess thermodynamic functions derived from densities and surface tensions of (p- or o-xylene + ethylene glycol dimethyl ether) between the temperatures (298.15 and 308.15) K
srf	0.02	N/m	373.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	368.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	363.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	358.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	353.18	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	348.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	343.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	338.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate

srf	0.02	N/m	333.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	328.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	323.18	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	318.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	308.12	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	303.15	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	298.03	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
srf	0.02	N/m	293.17	Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl adipate
tcondl	0.16	W/m×K	302.75	Thermal Conductivity Measurement of Polyglycol Alkyl Ethers at Temperatures from (303.15 to 393.15) K

tcondl	0.15	W/m×K	332.54	Thermal Conductivity Measurement of Polyglycol Alkyl Ethers at Temperatures from (303.15 to 393.15) K
tcondl	0.13	W/m×K	362.39	Thermal Conductivity Measurement of Polyglycol Alkyl Ethers at Temperatures from (303.15 to 393.15) K
tcondl	0.12	W/m×K	392.16	Thermal Conductivity Measurement of Polyglycol Alkyl Ethers at Temperatures from (303.15 to 393.15) K

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.47105e+01
Coeff. B	-3.24745e+03
Coeff. C	-3.62220e+01
Temperature range (K), min.	261.38
Temperature range (K), max.	381.73

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/T + C*ln(T) + D*T^2
Coeff. A	6.14883e+01
Coeff. B	-6.00557e+03
Coeff. C	-6.94194e+00
Coeff. D	5.62976e-06
Temperature range (K), min.	215.15
Temperature range (K), max.	536.15

Datasets

Speed of sound, m/s

Temperature, K - Liquid	Pressure, kPa - Liquid	Speed of sound, m/s - Liquid
293.15	100.00	1188.5
293.15	10000.00	1242.0
293.15	20000.00	1292.4
293.15	30000.00	1336.4
293.15	40000.00	1378.8
293.15	50000.00	1418.2
293.15	60000.00	1455.6
293.15	70000.00	1490.4
293.15	80000.00	1523.9
293.15	90000.00	1555.7
293.15	100000.00	1586.1
303.15	100.00	1144.8
303.15	10000.00	1201.1
303.15	20000.00	1252.2
303.15	30000.00	1299.6
303.15	40000.00	1343.2
303.15	50000.00	1384.1
303.15	60000.00	1422.5
303.15	70000.00	1458.0
303.15	80000.00	1492.6
303.15	90000.00	1525.7
303.15	100000.00	1557.2
313.15	100.00	1101.9
313.15	10000.00	1161.1
313.15	20000.00	1215.2
313.15	30000.00	1263.9
313.15	40000.00	1309.2
313.15	50000.00	1350.7
313.15	60000.00	1390.5
313.15	70000.00	1428.3
313.15	80000.00	1463.3
313.15	90000.00	1497.0
313.15	100000.00	1528.8
323.15	100.00	1059.4
323.15	10000.00	1122.4

323.15	20000.00	1178.7
323.15	30000.00	1229.3
323.15	40000.00	1275.9
323.15	50000.00	1319.6
323.15	60000.00	1361.5
323.15	70000.00	1398.6
323.15	80000.00	1434.7
323.15	90000.00	1468.9
323.15	100000.00	1501.5
333.15	100.00	1016.5
333.15	10000.00	1083.1
333.15	20000.00	1142.7
333.15	30000.00	1195.2
333.15	40000.00	1243.6
333.15	50000.00	1288.4
333.15	60000.00	1330.1
333.15	70000.00	1369.3
333.15	80000.00	1406.4
333.15	90000.00	1441.3
333.15	100000.00	1474.8
343.15	100.00	974.9
343.15	10000.00	1044.7
343.15	20000.00	1107.0
343.15	30000.00	1161.4
343.15	40000.00	1211.6
343.15	50000.00	1257.6
343.15	60000.00	1300.5
343.15	70000.00	1340.5
343.15	80000.00	1378.6
343.15	90000.00	1414.5
343.15	100000.00	1448.7
353.15	100.00	932.8
353.15	10000.00	1005.8
353.15	20000.00	1070.0
353.15	30000.00	1127.3
353.15	40000.00	1178.9
353.15	50000.00	1226.3
353.15	60000.00	1270.4
353.15	70000.00	1311.3
353.15	80000.00	1350.2
353.15	90000.00	1387.0
353.15	100000.00	1421.7

Reference *https://www.doi.org/10.1007/s10765-006-0110-x*

Thermal conductivity, W/m/K

Temperature, K - Liquid	Pressure, kPa - Liquid	Thermal conductivity, W/m/K - Liquid
245.46	104.60	0.1648
245.69	30045.00	0.1742
245.95	9806.60	0.1669
245.96	30102.80	0.1746
246.06	5008.20	0.1665
246.06	20070.20	0.1711
246.24	20007.00	0.1706
246.49	105.90	0.1650
246.52	5028.50	0.1666
246.69	10018.00	0.1683
246.75	10004.90	0.1682
246.79	5010.00	0.1662
247.52	103.30	0.1647
255.91	20016.00	0.1675
256.02	102.50	0.1606
256.02	30007.30	0.1706
256.10	10039.70	0.1643
256.21	5070.20	0.1623
256.75	30013.50	0.1707
256.81	20002.50	0.1679
256.83	10040.40	0.1642
256.90	5065.50	0.1625
256.95	102.50	0.1610
257.48	5064.50	0.1625
257.56	20021.50	0.1674
257.58	102.30	0.1607
257.62	10048.10	0.1643
257.66	30002.00	0.1708
266.15	10002.70	0.1617
266.18	5017.90	0.1601
266.19	30008.80	0.1688
266.26	101.30	0.1580
266.26	20003.00	0.1654
266.32	10010.80	0.1618
266.41	100.90	0.1580
266.58	5037.60	0.1598

266.87	20013.00	0.1650
266.95	30000.50	0.1684
267.11	30012.80	0.1683
267.35	20002.80	0.1653
267.37	10020.80	0.1617
267.50	101.10	0.1578
267.84	5027.00	0.1598
275.68	10023.80	0.1585
275.72	5003.30	0.1567
276.21	20023.80	0.1624
276.34	101.80	0.1547
276.45	30012.00	0.1657
276.49	100.90	0.1543
276.52	20015.00	0.1623
276.94	5006.00	0.1567
277.11	30008.30	0.1654
277.29	10005.30	0.1584
277.31	30011.50	0.1653
277.53	20015.00	0.1623
277.55	5005.50	0.1565
277.95	10000.50	0.1585
278.62	101.10	0.1539
285.80	10010.10	0.1551
286.18	5012.40	0.1531
286.23	101.50	0.1512
286.40	30001.00	0.1626
286.51	20013.30	0.1590
286.67	30008.60	0.1625
286.80	20011.00	0.1590
287.06	101.30	0.1509
287.07	30006.30	0.1621
287.28	10001.10	0.1549
287.46	5010.50	0.1530
287.68	20035.00	0.1586
288.14	10002.40	0.1545
288.62	100.90	0.1504
288.65	5009.10	0.1525
294.52	10025.60	0.1516
294.53	20008.50	0.1566
294.55	30011.50	0.1589
294.64	10026.90	0.1527
294.68	106.80	0.1466
294.68	20035.50	0.1566
294.75	104.20	0.1463

294.83	5021.10	0.1500
294.85	10037.10	0.1514
294.89	30004.50	0.1609
294.98	5020.10	0.1495
295.00	30018.00	0.1595
295.07	5014.00	0.1490
295.11	20026.30	0.1557
295.24	20010.30	0.1569
295.28	30016.00	0.1598
295.32	30006.00	0.1600
295.36	101.90	0.1467
295.36	20005.50	0.1558
295.37	10024.30	0.1515
295.38	104.30	0.1474
295.83	10044.50	0.1522
296.00	5027.10	0.1498
314.60	104.50	0.1394
314.65	105.60	0.1386
314.79	30008.30	0.1522
314.79	30008.30	0.1522
314.83	20003.30	0.1491
314.83	20003.30	0.1491
314.84	5010.30	0.1415
314.87	10003.10	0.1443
314.90	107.10	0.1402
314.95	20015.50	0.1476
314.95	20015.50	0.1476
315.06	10016.70	0.1440
315.14	30009.80	0.1529
315.14	30009.80	0.1529
315.17	10013.20	0.1447
315.17	10013.20	0.1447
315.23	5018.60	0.1424
315.26	30007.80	0.1519
315.26	30007.80	0.1519
315.27	105.40	0.1395
315.30	20008.50	0.1484
315.30	20008.50	0.1484
315.31	20000.80	0.1483
315.31	20000.80	0.1483
315.42	10011.90	0.1445
315.42	10011.90	0.1445
315.46	5010.30	0.1419
315.51	100.60	0.1391

334.53	10005.50	0.1361
334.53	10005.50	0.1361
334.58	102.10	0.1320
334.58	5005.90	0.1342
334.58	102.10	0.1320
334.58	5005.90	0.1342
334.65	5011.80	0.1347
334.65	5011.80	0.1347
334.69	90.00	0.1320
334.69	90.00	0.1320
334.76	10004.20	0.1366
334.76	10004.20	0.1366
334.94	10015.20	0.1373
334.94	10015.20	0.1373
334.98	5008.90	0.1344
334.98	5008.90	0.1344
335.06	101.60	0.1322
335.06	101.60	0.1322
335.31	10008.50	0.1374
335.31	10008.50	0.1374
335.39	5011.50	0.1347
335.39	5011.50	0.1347
335.53	105.60	0.1314
335.53	105.60	0.1314
335.59	10014.80	0.1366
335.59	10014.80	0.1366
335.96	5018.00	0.1343
335.96	5018.00	0.1343
336.14	105.60	0.1319
336.14	105.60	0.1319

Reference *https://www.doi.org/10.1007/s10765-008-0549-z*

Viscosity, Pa*s

Temperature, K - Liquid	Pressure, kPa - Liquid	Viscosity, Pa*s - Liquid
243.15	100.00	0.0008856
243.15	4540.00	0.0009166
243.15	9560.00	0.0009502
243.15	14590.00	0.0009855
243.15	19470.00	0.0010166

253.15	100.00	0.0007464
253.15	4550.00	0.0007729
253.15	9550.00	0.0007995
253.15	14450.00	0.0008296
253.15	19430.00	0.0008580
263.15	100.00	0.0006420
263.15	4560.00	0.0006618
263.15	9590.00	0.0006849
263.15	14590.00	0.0007095
263.15	19460.00	0.0007337
273.15	100.00	0.0005585
273.15	4560.00	0.0005759
273.15	9590.00	0.0005961
273.15	14550.00	0.0006173
273.15	19480.00	0.0006392
283.15	100.00	0.0004904
283.15	4550.00	0.0005056
283.15	9570.00	0.0005250
283.15	14460.00	0.0005458
283.15	19450.00	0.0005619
293.15	100.00	0.0004341
293.15	4530.00	0.0004492
293.15	9560.00	0.0004673
293.15	14460.00	0.0004850
293.15	19450.00	0.0005011
303.15	100.00	0.0003896
303.15	4540.00	0.0004031
303.15	9500.00	0.0004197
303.15	14440.00	0.0004334
303.15	19440.00	0.0004494
313.15	100.00	0.0003512
313.15	4540.00	0.0003641
313.15	9500.00	0.0003784
313.15	14440.00	0.0003922
313.15	19420.00	0.0004055
323.15	100.00	0.0003189
323.15	4560.00	0.0003303
323.15	9530.00	0.0003433
323.15	14450.00	0.0003562
323.15	19460.00	0.0003693
333.15	100.00	0.0002903
333.15	4550.00	0.0003018
333.15	9570.00	0.0003129
333.15	14460.00	0.0003256

333.15	19430.00	0.0003372
343.15	100.00	0.0002653
343.15	4540.00	0.0002754
343.15	9560.00	0.0002868
343.15	14440.00	0.0002985
343.15	19420.00	0.0003093
353.15	360.00	0.0002437
353.15	4560.00	0.0002539
353.15	9570.00	0.0002642
353.15	14440.00	0.0002754
353.15	19420.00	0.0002858
363.15	160.00	0.0002233
363.15	4560.00	0.0002330
363.15	9570.00	0.0002438
363.15	14440.00	0.0002557
363.15	19420.00	0.0002641
373.15	200.00	0.0002059
373.15	4560.00	0.0002157
373.15	9580.00	0.0002263
373.15	14440.00	0.0002355
373.15	19420.00	0.0002457

Reference *https://www.doi.org/10.1007/s10765-008-0503-0*

Mass density, kg/m3

Temperature, K - Liquid	Pressure, kPa - Liquid	Mass density, kg/m3 - Liquid
293.15	100.00	866.7
293.15	5000.00	871.1
293.15	10000.00	875.3
293.15	15000.00	879.5
293.15	20000.00	883.2
293.15	25000.00	887.2
293.15	30000.00	890.9
293.15	35000.00	894.4
293.15	40000.00	897.8
293.15	45000.00	901.1
293.15	50000.00	904.3
293.15	55000.00	907.5
293.15	60000.00	910.4
303.15	100.00	855.5

303.15	5000.00	860.2
303.15	10000.00	864.8
303.15	15000.00	869.2
303.15	20000.00	873.4
303.15	25000.00	877.4
303.15	30000.00	881.3
303.15	35000.00	885.1
303.15	40000.00	888.5
303.15	45000.00	891.9
303.15	50000.00	895.5
303.15	55000.00	898.6
303.15	60000.00	901.7
313.15	100.00	844.4
313.15	5000.00	849.4
313.15	10000.00	854.4
313.15	15000.00	859.1
313.15	20000.00	863.5
313.15	25000.00	867.7
313.15	30000.00	871.7
313.15	35000.00	875.7
313.15	40000.00	879.4
313.15	45000.00	883.1
313.15	50000.00	886.7
313.15	55000.00	890.0
313.15	60000.00	893.3
323.15	100.00	833.1
323.15	5000.00	838.5
323.15	10000.00	843.9
323.15	15000.00	848.7
323.15	20000.00	853.4
323.15	25000.00	858.0
323.15	30000.00	862.3
323.15	35000.00	866.4
323.15	40000.00	870.2
323.15	45000.00	874.2
323.15	50000.00	877.8
323.15	55000.00	881.4
323.15	60000.00	885.0
333.15	100.00	821.6
333.15	5000.00	827.5
333.15	10000.00	833.2
333.15	15000.00	838.7
333.15	20000.00	843.6
333.15	25000.00	848.4

333.15	30000.00	853.1
333.15	35000.00	857.4
333.15	40000.00	861.7
333.15	45000.00	865.6
333.15	50000.00	869.0
333.15	55000.00	873.3
333.15	60000.00	876.7
343.15	100.00	809.9
343.15	5000.00	816.3
343.15	10000.00	822.5
343.15	15000.00	828.3
343.15	20000.00	833.8
343.15	25000.00	838.7
343.15	30000.00	843.5
343.15	35000.00	848.0
343.15	40000.00	852.6
343.15	45000.00	856.6
343.15	50000.00	860.6
343.15	55000.00	864.5
343.15	60000.00	868.3
353.15	100.00	797.6
353.15	5000.00	804.8
353.15	10000.00	811.4
353.15	15000.00	817.6
353.15	20000.00	823.2
353.15	25000.00	828.7
353.15	30000.00	833.8
353.15	35000.00	838.6
353.15	40000.00	843.1
353.15	45000.00	847.8
353.15	50000.00	852.0
353.15	55000.00	856.0
353.15	60000.00	859.8

Reference *https://www.doi.org/10.1021/je0340304*

Sources

Temperature and Pressure Dependences of Thermophysical Properties of Some Ethylene Glycol Dimethyl Ethers from Ultrasonic Measurements:	https://www.doi.org/10.1007/s10765-006-0110-x
Surface tension of diethyl carbonate, 1,2-dimethoxyethane and diethyl ether at pressures: thermodynamic functions derived from densities and surface tensions of (p- or o-xylene + ethylene glycol dimethyl ether) between the temperatures (298.15 and 308.15) K:	https://www.doi.org/10.1016/j.fluid.2010.03.040 https://www.doi.org/10.1016/j.jct.2009.04.001

Volumetric Properties of Monoethylene Glycol Dimethyl Ether and Diethylene Glycol Dimethyl Ether up to 60 MPa:	https://www.doi.org/10.1021/je0340304
Solubility of Carotene in Binary Solvents Formed by Some Hydrocarbons with Dibutyl Ether and 1,2-Dimethoxyethane:	https://www.doi.org/10.1021/je030165y
Interactions of Volatile Organic Compounds with the Ionic Liquid 1-Butyl-1-methylpyrrolidinium Dicyanamide:	https://www.doi.org/10.1021/je200822w
Densities and Refractive Indices of Binary Mixtures for the Dimethyl Ether of a Glycol + Ethanol from T=288.15 K to 318.15 K:	https://www.doi.org/10.1021/je0302304
	https://www.cheric.org/files/research/kdb/mol/mol1050.mol
Interactions of volatile organic compounds with the ionic liquids 1-butyl-1-methylpyrrolidinium tetracyanoborate and 1-butyl-1-methylpyrrolidinium dicyanamide:	https://www.doi.org/10.1016/j.jct.2012.09.017
Interactions of volatile organic compounds with the ionic liquid 1-butyl-1-methylpyrrolidinium dicyanamide:	https://www.doi.org/10.1016/j.jct.2011.09.028
Thermodynamic dependence of limiting activity coefficients and Henry s law constants of glycol and glycol ethers in water:	https://www.doi.org/10.1016/j.fluid.2007.08.013
Density and Speed of Sound for the Binary Mixtures of Formamide with 2-Methoxyethanol, Acetophenone, Dimethylsulfoxide, and 1,2-Dimethoxyethane at Different Temperatures:	https://www.doi.org/10.1021/je700026d
Density and Viscosity Measurements of Diethylene Glycol Dimethyl Ether + 1,2-Dimethoxyethane + Monoethylene Glycol Dimethylether from 283.15 to 353.15 K: New modified UNIFAC parameters:	https://www.doi.org/10.1007/s10765-008-0503-0
Vapor−Liquid Equilibria of the system CO2 + 1,2-dimethoxyethane at 313.2 K and 333.2 K:	https://www.doi.org/10.1016/j.fluid.2008.07.003
Density and Viscosity of 1-Butyl-3-methylimidazolium Hydrogen Sulfate + Monoglyme + 1-Alcohol (Methanol, Ethanol, 1-Propanol, and 1-Butanol) at Atmospheric Pressure:	https://www.doi.org/10.1016/j.fluid.2017.11.008
Activity coefficients at infinite dilution of organic solutes in the ionic liquid 1-ethyl-3-methylimidazolium diethylenetriaminepentaacetate:	https://www.doi.org/10.1016/j.jct.2012.08.022
Infinite dilution activity coefficients of volatile organic compounds in two ionic liquids composed of the tris(pentafluoroethyl) trifluorophosphate ([FAP]) anion and a functionalized cation:	https://www.doi.org/10.1021/je301095j
	https://www.doi.org/10.1016/j.fluid.2010.10.008
	https://www.doi.org/10.1016/j.jct.2013.05.035
	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C110714&Units=SI
Apparent molar volumes and apparent molar heat capacities of aqueous tetraalkylammonium chlorides in dimethyl sulfoxide, 1,4-dioxane, and 1,2-dimethoxyethane at temperatures from 278.15 K to 393.15 K and at the pressure 0.1 MPa:	https://www.doi.org/10.1016/j.jct.2007.06.010
KDB Pure (Korean Thermophysical Properties Databank):	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1050
Standard partial molar volumes of some electrolytes in ethylene carbonate based mixtures:	https://www.doi.org/10.1016/j.jct.2003.09.005
Excess Molar Volumes and Surface Tensions of Trimethylbenzene + Ethylene Glycol Ester at 298.15 K and 318.15 K:	https://www.doi.org/10.1021/je050484k
Efficient determination of crystallisation and melting points at low cooling and heating rates with novel computer controlled equipment:	https://www.doi.org/10.1016/j.jct.2008.05.012
Isobaric Vapor-Liquid Equilibrium Data for Two Binary Systems n-Hexane + 1,2-Dimethoxyethane and Methylcyclopentane + 1,2-Dimethoxyethane at 101.3 kPa:	https://www.doi.org/10.1021/acs.jced.7b00802
KDB Vapor Pressure Data:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=1050
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Experimental Surface Tensions and Derived Surface Properties of Binary Mixtures of Water + Alkoxyethanols (C1E1, mC1E2, and C2E1) and Water + Ethylene Glycol Dimethyl Ether at T = (288.15 to 318.15) K:	https://www.doi.org/10.1021/je030173e
Bubble Temperature Measurements on Binary Mixtures Formed by Dimethoxyethane from 242 to 353K at Pressures Up to 60 MPa:	https://www.doi.org/10.1021/je020148t
Thermal Conductivity of Liquid Polyethers from (283.15 to 333.15) K and at Atmospheric Pressure:	https://www.doi.org/10.1007/s10765-008-0549-z
Non-ideal behaviour of a room temperature ionic liquid in an alkoxyethanol or polyether at T = (288.15 to 318.15) K:	https://www.doi.org/10.1021/je101361u
Thermophysical properties of dimethyl carbonate, acyclic and linear ethers at 303.15K Application of an extended cell model:	https://en.wikipedia.org/wiki/Joback_method
Solubilities of some organic solutes in 1-ethyl-3-methylimidazolium acetate.	https://www.doi.org/10.1016/j.jct.2007.06.002
McGowan Method:	https://www.doi.org/10.1016/j.tca.2006.05.010
Chromatographic measurements and predictions from COSMO-RS:	https://www.doi.org/10.1021/je900711h
Thermal Conductivity Measurement of Polyglycol Alkyl Ethers at Temperatures from (303.15 to 393.15) K:	https://www.doi.org/10.1016/j.jct.2011.11.005
Bubble temperature measurements on the binary mixtures formed by decane with a variety of compounds at 90.0 kPa:	http://link.springer.com/article/10.1007/BF02311772
Isobaric Vapor-Liquid Equilibrium for the Binary Systems of sec-Butyl Acetate + Methyl Ethyl Ketone, 2-Methoxyethanol, or 1,2-Dimethoxyethane at 101.3 kPa:	https://www.doi.org/10.1021/je900641w
	https://www.doi.org/10.1016/j.fluid.2004.10.027
	https://www.doi.org/10.1021/acs.jced.5b00582
Excess Molar Enthalpies and Hydrogen Bonding in Binary Mixtures Containing Ethers and Benzyl Alcohol at 308.15 K and Atmospheric Pressure:	https://www.doi.org/10.1021/je0504212

Legend

af:	Acentric Factor
affp:	Proton affinity
basg:	Gas basicity
chl:	Standard liquid enthalpy of combustion
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dm:	Dipole Moment
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rfi:	Refractive Index
rhoc:	Critical density
rhol:	Liquid Density
rinpol:	Non-polar retention indices
ripol:	Polar retention indices
speedsl:	Speed of sound in fluid
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tcondl:	Liquid thermal conductivity
tf:	Normal melting (fusion) point
vc:	Critical Volume
zc:	Critical Compressibility

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