

# Isopropyl Alcohol

Other names:	1-Methylethyl Alcohol
	1-methylethanol
	2-Hydroxypropane
	2-PROPANOL
	2-Propyl alcohol
	Alcojel
	Alcolo
	Alcool isopropilico
	Alcool isopropylique
	Alcosolve
	Alcosolve 2
	Alkolave
	Arquad DMCB
	Avantin
	Avantine
	Combi-Schutz
	Dimethylcarbinol
	Hartosol
	IPA
	IPS 1
	Imsol A
	Isohol
	Isopropanol
	Isopropyl alcohol, rubbing
	Lavacol
	Lutosol
	PRO
	Petrohol
	Propan-2-ol
	Propane, 2-hydroxy-
	Propanol-2
	Propol
	SEC-PROPYL ALCOHOL
	Spectrar
	Sterisol hand disinfectant
	Takineocol
	UN 1219
	Virahol
	Visco 1152
	i-Propanol

i-Propylalkohol  
 iso-C<sub>3</sub>H<sub>7</sub>OH  
 iso-Propylalkohol  
 n-Propan-2-ol  
 sec-Propanol  
**Inchi:** InChI=1S/C<sub>3</sub>H<sub>8</sub>O/c1-3(2)4/h3-4H,1-2H3  
**InchiKey:** KFZMGEQAYNKOFK-UHFFFAOYSA-N  
**Formula:** C<sub>3</sub>H<sub>8</sub>O  
**SMILES:** CC(C)O  
**Mol. weight [g/mol]:** 60.09  
**CAS:** 67-63-0

## Physical Properties

Property code	Value	Unit	Source
af	0.6650		KDB
affp	793.00	kJ/mol	NIST Webbook
affp	796.00 ± 6.00	kJ/mol	NIST Webbook
aiqt	672.04	K	KDB
basg	762.60	kJ/mol	NIST Webbook
chl	-2005.80 ± 0.40	kJ/mol	NIST Webbook
chl	-2005.10	kJ/mol	NIST Webbook
chl	-2006.90 ± 0.20	kJ/mol	NIST Webbook
dm	1.70	debye	KDB
dvisc	0.0020980	Paxs	Speeds of sound, isentropic compressibilities, viscosities and excess molar volumes of binary mixtures of methylcyclohexane + 2-alkanols or ethanol at T = 298.15 K
dvisc	0.0020630	Paxs	Thermodynamic properties of binary liquid mixtures of diethylenetriamine with alcohols at different temperatures
dvisc	0.0020443	Paxs	Densities and Viscosities of Binary Liquid Mixtures of Trichloroethylene and Tetrachloroethylene with Some Polar and Nonpolar Solvents
fil	2.30	% in Air	KDB
flu	12.70	% in Air	KDB
fpc	291.48	K	KDB

fpo	284.82	K	KDB
gf	-173.50	kJ/mol	KDB
gyrad	2.7260		KDB
hf	-272.80	kJ/mol	NIST Webbook
hf	-271.10	kJ/mol	NIST Webbook
hf	-272.30 ± 0.92	kJ/mol	NIST Webbook
hf	-272.80	kJ/mol	NIST Webbook
hf	-272.60	kJ/mol	KDB
hfl	-317.00 ± 0.30	kJ/mol	NIST Webbook
hfl	-318.70	kJ/mol	NIST Webbook
hfl	-318.20 ± 0.71	kJ/mol	NIST Webbook
hfus	4.09	kJ/mol	Joback Method
hvap	45.51	kJ/mol	NIST Webbook
hvap	44.00	kJ/mol	NIST Webbook
hvap	45.90 ± 0.20	kJ/mol	NIST Webbook
hvap	44.40	kJ/mol	NIST Webbook
hvap	45.48	kJ/mol	NIST Webbook
hvap	45.20 ± 0.10	kJ/mol	NIST Webbook
hvap	45.34 ± 0.02	kJ/mol	NIST Webbook
hvap	45.34 ± 0.02	kJ/mol	NIST Webbook
hvap	44.00	kJ/mol	NIST Webbook
hvap	45.20 ± 0.10	kJ/mol	NIST Webbook
hvap	40.00 ± 0.04	kJ/mol	NIST Webbook
ie	10.10 ± 0.02	eV	NIST Webbook
ie	10.15 ± 0.05	eV	NIST Webbook
ie	10.44	eV	NIST Webbook
ie	10.15 ± 0.07	eV	NIST Webbook
ie	10.17 ± 0.02	eV	NIST Webbook
ie	10.42	eV	NIST Webbook
ie	10.49 ± 0.03	eV	NIST Webbook
ie	10.42	eV	NIST Webbook
ie	10.36	eV	NIST Webbook
ie	10.29 ± 0.02	eV	NIST Webbook
ie	10.12 ± 0.03	eV	NIST Webbook
ie	10.18	eV	NIST Webbook
log10ws	0.43		Aqueous Solubility Prediction Method
log10ws	0.43		Estimated Solubility Method
logp	0.387		Crippen Method
mcvol	59.000	ml/mol	McGowan Method
nfpaf	%!d(float64=3)		KDB
nfpah	%!d(float64=1)		KDB
pc	4760.00 ± 20.00	kPa	NIST Webbook
pc	4764.00	kPa	KDB

pc	4761.00 ± 20.00	kPa	NIST Webbook
pc	4755.00	kPa	Isothermal Vapor-Liquid Equilibria for the 2-Propanol + n-Heptane System near the Critical Region
pc	5380.00	kPa	
pc	5370.23 ± 101.32	kPa	NIST Webbook
pc	4764.00	kPa	NIST Webbook
pc	4762.00 ± 4.75	kPa	NIST Webbook
pc	4716.00 ± 8.00	kPa	NIST Webbook
pc	4762.00	kPa	NIST Webbook
pc	4761.00 ± 20.00	kPa	NIST Webbook
pc	4770.00	kPa	NIST Webbook
rhoc	271.03 ± 1.20	kg/m3	NIST Webbook
rhoc	272.83	kg/m3	NIST Webbook
rhoc	272.71	kg/m3	NIST Webbook
rinpol	508.00		NIST Webbook
rinpol	490.00		NIST Webbook
rinpol	508.00		NIST Webbook
rinpol	491.00		NIST Webbook
rinpol	453.00		NIST Webbook
rinpol	480.00		NIST Webbook
rinpol	491.00		NIST Webbook
rinpol	453.00		NIST Webbook
rinpol	508.00		NIST Webbook
rinpol	491.00		NIST Webbook
rinpol	453.00		NIST Webbook
rinpol	481.00		NIST Webbook
rinpol	508.00		NIST Webbook
rinpol	453.00		NIST Webbook
rinpol	514.00		NIST Webbook
rinpol	530.00		NIST Webbook
rinpol	491.00		NIST Webbook
rinpol	474.00		NIST Webbook
rinpol	477.00		NIST Webbook
rinpol	516.00		NIST Webbook
rinpol	500.00		NIST Webbook
rinpol	475.00		NIST Webbook
rinpol	503.00		NIST Webbook
rinpol	481.00		NIST Webbook
rinpol	491.00		NIST Webbook
rinpol	475.00		NIST Webbook
rinpol	530.00		NIST Webbook
rinpol	474.00		NIST Webbook
rinpol	486.00		NIST Webbook

rinpol	474.00	NIST Webbook
rinpol	486.00	NIST Webbook
rinpol	486.00	NIST Webbook
rinpol	511.00	NIST Webbook
rinpol	500.00	NIST Webbook
rinpol	477.00	NIST Webbook
rinpol	499.00	NIST Webbook
rinpol	498.00	NIST Webbook
rinpol	477.00	NIST Webbook
rinpol	477.00	NIST Webbook
rinpol	516.00	NIST Webbook
rinpol	516.00	NIST Webbook
rinpol	502.00	NIST Webbook
rinpol	458.00	NIST Webbook
rinpol	488.00	NIST Webbook
rinpol	500.00	NIST Webbook
rinpol	514.00	NIST Webbook
rinpol	483.40	NIST Webbook
rinpol	506.00	NIST Webbook
rinpol	493.00	NIST Webbook
rinpol	496.00	NIST Webbook
rinpol	530.00	NIST Webbook
rinpol	456.00	NIST Webbook
rinpol	474.00	NIST Webbook
rinpol	472.00	NIST Webbook
rinpol	480.00	NIST Webbook
rinpol	483.00	NIST Webbook
rinpol	510.00	NIST Webbook
rinpol	510.00	NIST Webbook
rinpol	515.00	NIST Webbook
rinpol	515.80	NIST Webbook
rinpol	458.00	NIST Webbook
rinpol	446.00	NIST Webbook
rinpol	495.40	NIST Webbook
rinpol	524.00	NIST Webbook
rinpol	524.00	NIST Webbook
rinpol	494.00	NIST Webbook
rinpol	524.00	NIST Webbook
rinpol	450.00	NIST Webbook
rinpol	463.00	NIST Webbook
rinpol	486.00	NIST Webbook
rinpol	490.00	NIST Webbook
rinpol	476.00	NIST Webbook
rinpol	460.00	NIST Webbook

rinpol	456.00	NIST Webbook
rinpol	477.00	NIST Webbook
rinpol	446.00	NIST Webbook
rinpol	450.00	NIST Webbook
rinpol	444.00	NIST Webbook
rinpol	450.00	NIST Webbook
rinpol	447.00	NIST Webbook
rinpol	500.00	NIST Webbook
rinpol	500.00	NIST Webbook
ripol	940.00	NIST Webbook
ripol	922.00	NIST Webbook
ripol	962.00	NIST Webbook
ripol	935.00	NIST Webbook
ripol	917.00	NIST Webbook
ripol	923.00	NIST Webbook
ripol	927.00	NIST Webbook
ripol	908.00	NIST Webbook
ripol	962.00	NIST Webbook
ripol	884.00	NIST Webbook
ripol	921.00	NIST Webbook
ripol	942.00	NIST Webbook
ripol	931.00	NIST Webbook
ripol	931.00	NIST Webbook
ripol	906.00	NIST Webbook
ripol	884.00	NIST Webbook
ripol	933.00	NIST Webbook
ripol	910.00	NIST Webbook
ripol	975.00	NIST Webbook
ripol	970.00	NIST Webbook
ripol	947.00	NIST Webbook
ripol	938.00	NIST Webbook
ripol	925.00	NIST Webbook
ripol	912.00	NIST Webbook
ripol	921.00	NIST Webbook
ripol	885.00	NIST Webbook
ripol	917.00	NIST Webbook
ripol	884.00	NIST Webbook
ripol	926.00	NIST Webbook
ripol	925.00	NIST Webbook
ripol	884.00	NIST Webbook
ripol	923.00	NIST Webbook
ripol	948.00	NIST Webbook
ripol	922.00	NIST Webbook
ripol	928.00	NIST Webbook

ripol	917.00		NIST Webbook
ripol	924.00		NIST Webbook
ripol	935.00		NIST Webbook
ripol	970.00		NIST Webbook
ripol	975.00		NIST Webbook
ripol	909.00		NIST Webbook
ripol	938.00		NIST Webbook
ripol	932.00		NIST Webbook
ripol	888.00		NIST Webbook
ripol	884.00		NIST Webbook
ripol	912.00		NIST Webbook
ripol	921.00		NIST Webbook
ripol	950.00		NIST Webbook
ripol	941.40		NIST Webbook
ripol	935.00		NIST Webbook
ripol	920.00		NIST Webbook
ripol	884.00		NIST Webbook
ripol	891.00		NIST Webbook
ripol	927.00		NIST Webbook
ripol	940.00		NIST Webbook
ripol	910.00		NIST Webbook
ripol	920.00		NIST Webbook
ripol	932.00		NIST Webbook
ripol	912.00		NIST Webbook
ripol	922.00		NIST Webbook
ripol	928.00		NIST Webbook
ripol	935.00		NIST Webbook
ripol	963.00		NIST Webbook
ripol	885.00		NIST Webbook
ripol	962.00		NIST Webbook
ripol	957.00		NIST Webbook
ripol	949.00		NIST Webbook
ripol	957.00		NIST Webbook
ripol	949.00		NIST Webbook
ripol	935.00		NIST Webbook
ripol	903.00		NIST Webbook
sl	190.80	J/molxK	NIST Webbook
sl	192.90	J/molxK	NIST Webbook
sl	179.90	J/molxK	NIST Webbook
sl	180.58	J/molxK	NIST Webbook
tb	356.00 ± 0.50	K	NIST Webbook
tb	355.65 ± 1.50	K	NIST Webbook
tb	356.00 ± 0.50	K	NIST Webbook
tb	356.15 ± 1.00	K	NIST Webbook

tb	355.19 ± 0.20	K	NIST Webbook
tb	355.59 ± 0.20	K	NIST Webbook
tb	355.15 ± 1.50	K	NIST Webbook
tb	355.65 ± 1.00	K	NIST Webbook
tb	354.20 ± 0.50	K	NIST Webbook
tb	354.65 ± 1.50	K	NIST Webbook
tb	355.75 ± 0.30	K	NIST Webbook
tb	351.65 ± 3.00	K	NIST Webbook
tb	355.55 ± 0.20	K	NIST Webbook
tb	355.41 ± 0.05	K	NIST Webbook
tb	355.43 ± 0.05	K	NIST Webbook
tb	355.40 ± 0.05	K	NIST Webbook
tb	355.41 ± 0.05	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tb	355.40 ± 0.05	K	NIST Webbook
tb	355.15 ± 0.20	K	NIST Webbook
tb	355.50 ± 0.30	K	NIST Webbook
tb	355.55 ± 0.30	K	NIST Webbook
tb	353.85 ± 0.50	K	NIST Webbook
tb	355.60 ± 0.20	K	NIST Webbook
tb	355.15 ± 0.20	K	NIST Webbook
tb	355.60 ± 0.50	K	NIST Webbook
tb	355.60 ± 0.50	K	NIST Webbook
tb	82.21 ± 0.20	K	NIST Webbook
tb	355.40	K	KDB
tb	355.37	K	Physical properties and phase equilibria of the system isopropyl acetate + isopropanol + 1-octyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide
tb	355.15	K	Multiphase equilibria for mixtures containing water, isopropanol, propionic acid, and isopropyl propionate
tb	355.53	K	Isobaric VLE at 0.6 MPa for binary systems isobutyl acetate + ethanol, + 1-propanol or + 2-propanol
tb	355.35	K	Isobaric vapor-liquid equilibrium data for the binary system methyl acetate + isopropyl acetate and the quaternary system methyl acetate + methanol + isopropanol + isopropyl acetate at 101.3 kPa



tb	355.60	K	Isobaric vapor-liquid equilibria of the binary mixtures propylene glycol methyl ether + propylene glycol methyl ether acetate, methyl acetate + propylene glycol methyl ether and methanol + propylene glycol methyl ether acetate at 101.3 kPa
tb	355.40	K	Experimental studies and thermodynamic analysis of isobaric vapor-liquid-liquid equilibria of 2-propanol + water system using n-propyl acetate and isopropyl acetate as entrainers
tb	355.61	K	VLE of the binary systems (dimethyl carbonate with 2-propanol or 2-butanol) and (diethyl carbonate with methylcyclohexane) at 101.3 kPa
tb	355.45	K	Isobaric (vapour + liquid) equilibrium for (2-propanol + water + ammonium thiocyanate): Fitting the data by an empirical equation
tb	355.25	K	Isobaric (vapour + liquid + liquid) equilibrium data for (di-n-propyl ether + n-propyl alcohol + water) and (diisopropyl ether + isopropyl alcohol + water) systems at 100 kPa
tb	355.27	K	Vapour-liquid equilibrium and extractive distillation for separation of azeotrope isopropyl alcohol and diisopropyl ether
tb	355.33	K	Separation of the mixture (isopropyl alcohol + diisopropyl ether + n-propanol): Entrainer selection, interaction exploration and vapour-liquid equilibrium measurements
tb	355.71	K	A new analysis method for improving collection of vapor-liquid equilibrium (VLE) data of binary mixtures using differential scanning calorimetry (DSC)
tb	355.33	K	Vapor Liquid Equilibria for Ternary Mixtures of Isopropyl Alcohol, Isopropyl Acetate, and DMSO at 101.3 kPa

tb	355.60	K	Acetonitrile Dehydration via Extractive Distillation Using Low Transition Temperature Mixtures as Entrainers
tb	355.37	K	Vapor Liquid Equilibria for Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene at 101 kPa
tb	355.35	K	Measurement and Correlation of Excess Molar Enthalpies for Ethylene Glycol + Alkanol Systems at the Temperatures (298.15, 308.15, and 323.15) K
tb	355.15	K	Vapor-Liquid Equilibria for the Binary Systems of Dimethoxymethane with Some Fuel Oxygenates
tb	355.41	K	Vapor-Liquid Equilibrium Behavior of Tolan in Alcohol
tb	355.39	K	Vapor-Liquid Equilibrium Behaviors of Coumarin and Vanillin in Ethanol, 1-Propanol, and 2-Propanol
tb	355.35	K	Isobaric Vapor-Liquid Equilibrium for Binary Systems of Toluene + Ethanol, Toluene + Isopropanol at (101.3, 121.3, 161.3 and 201.3) kPa
tb	355.40	K	Vapor-Liquid Equilibrium Behaviors of 3-Ethoxy-4-hydroxybenzaldehyde in Alcohol
tb	355.60 ± 0.50	K	NIST Webbook
tb	355.40	K	Vapor Liquid Equilibrium Behaviors of 5-Methyl-2-(1-methylethyl)phenol in Alcohol
tb	355.95 ± 1.00	K	NIST Webbook
tb	355.45 ± 1.00	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tb	355.50 ± 0.20	K	NIST Webbook
tb	355.46 ± 0.20	K	NIST Webbook
tb	355.55 ± 0.10	K	NIST Webbook
tb	355.44 ± 0.10	K	NIST Webbook
tb	355.54 ± 0.10	K	NIST Webbook

tb	355.65	K	Isobaric Vapor-Liquid Equilibrium for (Propan-2-ol + Water + 1-Butyl-3-methylimidazolium Tetrafluoroborate)
tb	355.42 ± 0.20	K	NIST Webbook
tb	355.42 ± 0.30	K	NIST Webbook
tb	355.42 ± 0.07	K	NIST Webbook
tb	355.65 ± 0.20	K	NIST Webbook
tb	355.45 ± 0.50	K	NIST Webbook
tb	354.55 ± 0.50	K	NIST Webbook
tb	354.95 ± 0.50	K	NIST Webbook
tb	355.45 ± 0.30	K	NIST Webbook
tb	355.51 ± 0.10	K	NIST Webbook
tb	355.15 ± 2.00	K	NIST Webbook
tb	355.90 ± 0.40	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tb	354.87 ± 0.30	K	NIST Webbook
tb	355.25 ± 0.30	K	NIST Webbook
tb	355.55 ± 0.30	K	NIST Webbook
tb	355.57 ± 0.10	K	NIST Webbook
tb	355.39 ± 0.20	K	NIST Webbook
tb	355.60 ± 0.40	K	NIST Webbook
tb	355.45 ± 0.50	K	NIST Webbook
tb	355.35 ± 0.30	K	NIST Webbook
tb	355.85 ± 0.50	K	NIST Webbook
tb	355.65 ± 1.00	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tb	355.15 ± 1.30	K	NIST Webbook
tb	355.65 ± 0.50	K	NIST Webbook
tb	364.85 ± 0.50	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tb	355.40 ± 0.10	K	NIST Webbook
tb	353.90 ± 2.00	K	NIST Webbook
tb	355.45 ± 0.40	K	NIST Webbook
tb	355.48 ± 0.44	K	NIST Webbook
tb	355.65 ± 0.30	K	NIST Webbook
tb	355.42 ± 0.20	K	NIST Webbook
tb	355.60	K	NIST Webbook
tb	385.20 ± 0.20	K	NIST Webbook
tb	355.60 ± 0.10	K	NIST Webbook
tb	355.40	K	NIST Webbook
tb	357.65 ± 1.00	K	NIST Webbook
tb	354.65 ± 1.00	K	NIST Webbook
tb	355.35 ± 0.30	K	NIST Webbook
tb	355.48 ± 0.33	K	NIST Webbook

tb	355.15 ± 1.00	K	NIST Webbook
tb	355.25 ± 0.50	K	NIST Webbook
tb	355.30 ± 0.50	K	NIST Webbook
tb	355.60 ± 0.25	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tb	355.45 ± 0.10	K	NIST Webbook
tb	354.70 ± 1.00	K	NIST Webbook
tb	3.50 ± 2.00	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tb	355.65 ± 1.00	K	NIST Webbook
tb	355.55 ± 0.30	K	NIST Webbook
tb	355.35 ± 0.50	K	NIST Webbook
tb	355.45	K	NIST Webbook
tb	355.35 ± 0.50	K	NIST Webbook
tb	355.48 ± 0.30	K	NIST Webbook
tb	355.16 ± 0.20	K	NIST Webbook
tb	355.37 ± 0.30	K	NIST Webbook
tb	355.54 ± 0.20	K	NIST Webbook
tb	355.55 ± 0.15	K	NIST Webbook
tb	355.45 ± 0.08	K	NIST Webbook
tb	355.45 ± 0.30	K	NIST Webbook
tb	355.45 ± 0.40	K	NIST Webbook
tb	353.60 ± 0.30	K	NIST Webbook
tb	355.45	K	NIST Webbook
tb	355.45 ± 0.25	K	NIST Webbook
tb	353.60 ± 0.50	K	NIST Webbook
tb	355.50 ± 0.50	K	NIST Webbook
tb	355.39 ± 0.30	K	NIST Webbook
tb	355.50 ± 0.40	K	NIST Webbook
tb	355.70 ± 0.30	K	NIST Webbook
tb	355.20 ± 0.60	K	NIST Webbook
tb	355.55 ± 0.30	K	NIST Webbook
tb	355.00 ± 0.30	K	NIST Webbook
tb	355.45 ± 0.30	K	NIST Webbook
tb	354.85 ± 0.30	K	NIST Webbook
tb	355.45 ± 0.10	K	NIST Webbook
tb	355.06 ± 0.25	K	NIST Webbook
tb	355.45 ± 0.30	K	NIST Webbook
tb	355.45 ± 0.20	K	NIST Webbook
tb	355.45 ± 0.40	K	NIST Webbook
tb	355.55 ± 0.50	K	NIST Webbook
tc	508.30 ± 0.30	K	NIST Webbook
tc	508.60	K	NIST Webbook
tc	508.00 ± 0.60	K	NIST Webbook

tc	508.00 ± 0.60	K	NIST Webbook
tc	508.00	K	NIST Webbook
tc	507.36 ± 0.20	K	NIST Webbook
tc	508.30	K	NIST Webbook
tc	508.30 ± 0.05	K	NIST Webbook
tc	508.30 ± 1.00	K	NIST Webbook
tc	508.30 ± 0.20	K	NIST Webbook
tc	508.30	K	KDB
tc	507.80	K	NIST Webbook
tc	511.20 ± 3.00	K	NIST Webbook
tc	516.60	K	NIST Webbook
tc	508.80	K	NIST Webbook
tc	508.40 ± 0.30	K	NIST Webbook
tc	508.15 ± 0.50	K	NIST Webbook
tc	511.50	K	NIST Webbook
tc	508.26	K	NIST Webbook
tc	508.30 ± 0.30	K	NIST Webbook
tc	508.72	K	One- and two-phase isochoric heat capacities and saturated densities of 2-propanol in the critical and supercritical regions
tc	508.30 ± 0.30	K	NIST Webbook
tf	183.60	K	KDB
tf	183.90	K	Aqueous Solubility Prediction Method
tf	184.65	K	NIST Webbook
tf	185.35	K	NIST Webbook
tf	185.75 ± 0.50	K	NIST Webbook
tt	185.26 ± 0.05	K	NIST Webbook
tt	185.25 ± 0.06	K	NIST Webbook
tt	185.20 ± 0.05	K	NIST Webbook
tt	184.67 ± 0.10	K	NIST Webbook
tt	184.60 ± 0.30	K	NIST Webbook
tt	184.60 ± 0.15	K	NIST Webbook
vc	0.223 ± 0.003	m3/kmol	NIST Webbook
vc	0.222	m3/kmol	NIST Webbook
vc	0.222	m3/kmol	KDB
zc	0.2502460		KDB
zra	0.25		KDB

## Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	110.80 ± 1.60	J/mol×K	393.65	NIST Webbook
cpg	109.20 ± 1.60	J/mol×K	384.95	NIST Webbook
cpg	148.10 ± 1.60	J/mol×K	597.25	NIST Webbook
cpg	142.60 ± 1.60	J/mol×K	567.05	NIST Webbook
cpg	137.50 ± 1.60	J/mol×K	539.05	NIST Webbook
cpg	132.90 ± 1.60	J/mol×K	513.95	NIST Webbook
cpg	130.30 ± 1.60	J/mol×K	499.75	NIST Webbook
cpg	127.01	J/mol×K	473.15	NIST Webbook
cpg	124.20 ± 1.60	J/mol×K	466.75	NIST Webbook
cpg	121.70 ± 1.60	J/mol×K	453.15	NIST Webbook
cpg	122.80	J/mol×K	451.15	NIST Webbook
cpg	108.10 ± 1.60	J/mol×K	378.85	NIST Webbook
cpg	118.70	J/mol×K	431.15	NIST Webbook
cpg	117.02	J/mol×K	423.15	NIST Webbook
cpg	114.35	J/mol×K	411.15	NIST Webbook
cpg	113.00 ± 1.60	J/mol×K	405.35	NIST Webbook
cpg	106.29	J/mol×K	373.15	NIST Webbook
cpg	105.77	J/mol×K	371.15	NIST Webbook
cpg	105.70 ± 1.60	J/mol×K	365.75	NIST Webbook
cpg	103.06	J/mol×K	358.72	NIST Webbook
cpg	110.08	J/mol×K	391.15	NIST Webbook
cpg	122.10	J/mol×K	448.15	NIST Webbook
cpg	126.70 ± 1.60	J/mol×K	480.55	NIST Webbook
cpg	111.65	J/mol×K	398.15	NIST Webbook
cpl	173.13	J/mol×K	521.87	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	180.16	J/mol×K	509.45	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	178.84	J/mol×K	509.55	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	179.98	J/mol×K	509.64	Influence of nanofluid instability on thermodynamic properties near the critical point

cpl	177.46	J/mol×K	509.79	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	177.28	J/mol×K	509.99	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	178.12	J/mol×K	510.14	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	177.94	J/mol×K	510.23	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	176.68	J/mol×K	510.33	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	178.60	J/mol×K	510.48	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	176.74	J/mol×K	516.90	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	176.80	J/mol×K	516.99	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	176.80	J/mol×K	517.08	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	172.17	J/mol×K	517.27	Influence of nanofluid instability on thermodynamic properties near the critical point

cpl	179.56	J/mol×K	509.35	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	168.57	J/mol×K	521.96	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	186.90	J/mol×K	508.76	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	168.63	J/mol×K	522.33	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	171.63	J/mol×K	522.42	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	173.85	J/mol×K	522.51	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	192.91	J/mol×K	508.67	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	168.39	J/mol×K	530.01	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	168.27	J/mol×K	532.04	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	168.33	J/mol×K	535.11	Influence of nanofluid instability on thermodynamic properties near the critical point



cpl	168.39	J/mol×K	540.06	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	168.63	J/mol×K	545.13	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	169.77	J/mol×K	560.04	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	173.85	J/mol×K	570.09	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	174.22	J/mol×K	580.16	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	176.38	J/mol×K	590.07	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	178.60	J/mol×K	600.10	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	161.20	J/mol×K	298.15	NIST Webbook
cpl	154.75	J/mol×K	298.15	NIST Webbook
cpl	165.60	J/mol×K	311.60	NIST Webbook
cpl	154.43	J/mol×K	298.15	NIST Webbook
cpl	162.80	J/mol×K	298.20	NIST Webbook
cpl	180.30	J/mol×K	324.00	NIST Webbook
cpl	154.00	J/mol×K	298.00	NIST Webbook
cpl	159.99	J/mol×K	298.04	NIST Webbook
cpl	186.90	J/mol×K	508.57	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	163.60	J/mol×K	298.00	NIST Webbook
cpl	149.75	J/mol×K	292.84	NIST Webbook

cpl	180.30	J/mol×K	298.10	NIST Webbook
cpl	185.69	J/mol×K	508.47	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	152.30	J/mol×K	293.10	NIST Webbook
cpl	169.90	J/mol×K	303.00	NIST Webbook
cpl	187.80	J/mol×K	508.37	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	195.91	J/mol×K	508.28	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	208.53	J/mol×K	508.18	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	218.14	J/mol×K	508.16	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	172.40	J/mol×K	303.20	NIST Webbook
cpl	175.18	J/mol×K	522.60	Influence of nanofluid instability on thermodynamic properties near the critical point
cpl	151.00	J/mol×K	293.10	NIST Webbook
cpl	173.19	J/mol×K	522.14	Influence of nanofluid instability on thermodynamic properties near the critical point
dvisc	0.0015630	Paxs	308.15	Densities and viscosities of binary mixtures of ethylmethylketone and 2-alkanols; application of the ERAS model and cubic EOS

dvisc	0.0023820	Paxs	293.15	Viscosities, Densities, and Speed of Sound of the Cycloalkanes with Secondary Alcohols at T = (293.15, 298.15, and 303.15) K: New UNIFAC-VISCO Interaction Parameters
dvisc	0.0020450	Paxs	298.15	Viscosities, Densities, and Speed of Sound of the Cycloalkanes with Secondary Alcohols at T = (293.15, 298.15, and 303.15) K: New UNIFAC-VISCO Interaction Parameters
dvisc	0.0017630	Paxs	303.15	Viscosities, Densities, and Speed of Sound of the Cycloalkanes with Secondary Alcohols at T = (293.15, 298.15, and 303.15) K: New UNIFAC-VISCO Interaction Parameters
dvisc	0.0020550	Paxs	298.15	Densities and Viscosities of Binary Mixtures of Cyclohexanone and 2-Alkanols
dvisc	0.0017880	Paxs	303.15	Densities and Viscosities of Binary Mixtures of Cyclohexanone and 2-Alkanols
dvisc	0.0015630	Paxs	308.15	Densities and Viscosities of Binary Mixtures of Cyclohexanone and 2-Alkanols
dvisc	0.0013780	Paxs	313.15	Densities and Viscosities of Binary Mixtures of Cyclohexanone and 2-Alkanols

dvisc	0.0023840	Paxs	293.15	Viscosities and Densities of Binary Mixtures of (N-Acetylmorpholine + Alkanols) from (293.15 to 323.15) K
dvisc	0.0017520	Paxs	303.15	Viscosities and Densities of Binary Mixtures of (N-Acetylmorpholine + Alkanols) from (293.15 to 323.15) K
dvisc	0.0010145	Paxs	323.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0013350	Paxs	313.15	Viscosities and Densities of Binary Mixtures of (N-Acetylmorpholine + Alkanols) from (293.15 to 323.15) K
dvisc	0.0010380	Paxs	323.15	Viscosities and Densities of Binary Mixtures of (N-Acetylmorpholine + Alkanols) from (293.15 to 323.15) K
dvisc	0.0022256	Paxs	293.15	Densities and Viscosities of Binary Liquid Mixtures of 2-Butanone with Branched Alcohols at (293.15 to 313.15) K

dvisc	0.0019102	Paxs	298.15	Densities and Viscosities of Binary Liquid Mixtures of 2-Butanone with Branched Alcohols at (293.15 to 313.15) K
dvisc	0.0017370	Paxs	303.15	Densities and Viscosities of Binary Liquid Mixtures of 2-Butanone with Branched Alcohols at (293.15 to 313.15) K
dvisc	0.0010020	Paxs	323.15	Densities and Viscosities of Diethyl Carbonate + Toluene, + Methanol, and + 2-Propanol from (293.15 to 363.15) K
dvisc	0.0012880	Paxs	313.15	Densities and Viscosities of Diethyl Carbonate + Toluene, + Methanol, and + 2-Propanol from (293.15 to 363.15) K
dvisc	0.0017430	Paxs	303.15	Densities and Viscosities of Diethyl Carbonate + Toluene, + Methanol, and + 2-Propanol from (293.15 to 363.15) K
dvisc	0.0020690	Paxs	298.15	Densities and Viscosities of Diethyl Carbonate + Toluene, + Methanol, and + 2-Propanol from (293.15 to 363.15) K
dvisc	0.0023820	Paxs	293.15	Densities and Viscosities of Diethyl Carbonate + Toluene, + Methanol, and + 2-Propanol from (293.15 to 363.15) K

dvisc	0.0013790	Paxs	313.15	Densities and viscosities of binary mixtures of ethylmethylketone and 2-alkanols; application of the ERAS model and cubic EOS
dvisc	0.0015242	Paxs	308.15	Densities and Viscosities of Binary Liquid Mixtures of 2-Butanone with Branched Alcohols at (293.15 to 313.15) K
dvisc	0.0017880	Paxs	303.15	Densities and viscosities of binary mixtures of ethylmethylketone and 2-alkanols; application of the ERAS model and cubic EOS
dvisc	0.0020550	Paxs	298.15	Densities and viscosities of binary mixtures of ethylmethylketone and 2-alkanols; application of the ERAS model and cubic EOS
dvisc	0.0006241	Paxs	333.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0007890	Paxs	333.15	Densities and Viscosities of Diethyl Carbonate + Toluene, + Methanol, and + 2-Propanol from (293.15 to 363.15) K

dvisc	0.0013297	Paxs	313.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0017694	Paxs	303.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0023621	Paxs	293.15	Experimental excess molar properties of binary mixtures of (3-amino-1-propanol + isobutanol, 2-propanol) at T = (293.15 to 333.15) K and modelling the excess molar volume by Prigogine-Flory-Patterson theory
dvisc	0.0015730	Paxs	308.15	Studies of mixing properties of binary systems of 2-propanol with hexadecane and squalane at T = (298.15, 303.15, and 308.15) K
dvisc	0.0017580	Paxs	303.15	Studies of mixing properties of binary systems of 2-propanol with hexadecane and squalane at T = (298.15, 303.15, and 308.15) K

dvisc	0.0020610	Paxs	298.15	Studies of mixing properties of binary systems of 2-propanol with hexadecane and squalane at T = (298.15, 303.15, and 308.15) K
dvisc	0.0024050	Paxs	293.15	Viscosities and densities for binary mixtures of N-methylpiperazine with methanol, ethanol, n-propanol, iso-propanol, n-butanol and iso-butanol at 293.15, 298.15 and 303.15K
dvisc	0.0010411	Paxs	323.15	Densities and viscosities of binary mixtures of {dimethylsulfoxide + aliphatic lower alkanols (C1 C3)} at temperatures from T = 303.15 K to T = 323.15 K
dvisc	0.0011822	Paxs	318.15	Densities and viscosities of binary mixtures of {dimethylsulfoxide + aliphatic lower alkanols (C1 C3)} at temperatures from T = 303.15 K to T = 323.15 K
dvisc	0.0013554	Paxs	313.15	Densities and viscosities of binary mixtures of {dimethylsulfoxide + aliphatic lower alkanols (C1 C3)} at temperatures from T = 303.15 K to T = 323.15 K
dvisc	0.0015529	Paxs	308.15	Densities and viscosities of binary mixtures of {dimethylsulfoxide + aliphatic lower alkanols (C1 C3)} at temperatures from T = 303.15 K to T = 323.15 K



dvisc	0.0017630	Paxs	303.15	Viscosity, density, and speed of sound of methylcyclopentane with primary and secondary alcohols at T = (293.15, 298.15, and 303.15) K
dvisc	0.0020450	Paxs	298.15	Viscosity, density, and speed of sound of methylcyclopentane with primary and secondary alcohols at T = (293.15, 298.15, and 303.15) K
dvisc	0.0023820	Paxs	293.15	Viscosity, density, and speed of sound of methylcyclopentane with primary and secondary alcohols at T = (293.15, 298.15, and 303.15) K
dvisc	0.0011300	Paxs	313.00	Ultrasonic velocity, viscosity and excess properties of binary mixture of tetrahydrofuran with 1-propanol and 2-propanol
dvisc	0.0013472	Paxs	313.15	Densities and Viscosities of Binary Liquid Mixtures of 2-Butanone with Branched Alcohols at (293.15 to 313.15) K
dvisc	0.0014900	Paxs	303.00	Ultrasonic velocity, viscosity and excess properties of binary mixture of tetrahydrofuran with 1-propanol and 2-propanol
dvisc	0.0006260	Paxs	343.15	Densities and Viscosities of Diethyl Carbonate + Toluene, + Methanol, and + 2-Propanol from (293.15 to 363.15) K

dvisc	0.0021000	Paxs	293.00	Ultrasonic velocity, viscosity and excess properties of binary mixture of tetrahydrofuran with 1-propanol and 2-propanol
dvisc	0.0017820	Paxs	303.15	Viscosities and densities for binary mixtures of N-methylpiperazine with methanol, ethanol, n-propanol, iso-propanol, n-butanol and iso-butanol at 293.15, 298.15 and 303.15K
dvisc	0.0020620	Paxs	298.15	Viscosities and densities for binary mixtures of N-methylpiperazine with methanol, ethanol, n-propanol, iso-propanol, n-butanol and iso-butanol at 293.15, 298.15 and 303.15K
dvisc	0.0017919	Paxs	303.15	Densities and viscosities of binary mixtures of {dimethylsulfoxide + aliphatic lower alkanols (C1 C3)} at temperatures from T = 303.15 K to T = 323.15 K
econd	8.08e-05	S/m	313.15	Electrical Conductivity of Caprolactam Tetrabutylammonium Bromide Ionic Liquids in Aqueous and Alcohol Binary Systems
econd	7.50e-05	S/m	308.15	Electrical Conductivity of Caprolactam Tetrabutylammonium Bromide Ionic Liquids in Aqueous and Alcohol Binary Systems

econd	7.00e-05	S/m	303.15	Electrical Conductivity of Caprolactam Tetrabutylammonium Bromide Ionic Liquids in Aqueous and Alcohol Binary Systems
econd	5.20e-05	S/m	298.15	Electrical Conductivity of Caprolactam Tetrabutylammonium Bromide Ionic Liquids in Aqueous and Alcohol Binary Systems
econd	8.43e-05	S/m	318.15	Electrical Conductivity of Caprolactam Tetrabutylammonium Bromide Ionic Liquids in Aqueous and Alcohol Binary Systems
hfust	5.41	kJ/mol	185.20	NIST Webbook
hfust	5.30	kJ/mol	184.60	NIST Webbook
hfust	5.30	kJ/mol	184.60	NIST Webbook
hfust	5.41	kJ/mol	185.20	NIST Webbook
hfust	5.37	kJ/mol	184.67	NIST Webbook
hfust	5.41	kJ/mol	185.20	NIST Webbook
hfust	5.37	kJ/mol	184.70	NIST Webbook
hvapt	45.70	kJ/mol	323.50	NIST Webbook
hvapt	39.10	kJ/mol	451.50	NIST Webbook
hvapt	38.90 ± 0.10	kJ/mol	363.00	NIST Webbook
hvapt	39.80 ± 0.10	kJ/mol	355.00	NIST Webbook
hvapt	41.00 ± 0.10	kJ/mol	346.00	NIST Webbook
hvapt	42.80	kJ/mol	346.00	NIST Webbook
hvapt	42.70 ± 0.10	kJ/mol	330.00	NIST Webbook
hvapt	45.50	kJ/mol	318.00	NIST Webbook
hvapt	43.20	kJ/mol	324.00	NIST Webbook
hvapt	43.10	kJ/mol	343.50	NIST Webbook
hvapt	39.20	kJ/mol	420.00	NIST Webbook
hvapt	41.30	kJ/mol	366.50	NIST Webbook
hvapt	42.00	kJ/mol	357.50	NIST Webbook
hvapt	50.30	kJ/mol	211.50	NIST Webbook
hvapt	44.80	kJ/mol	327.50	NIST Webbook
hvapt	10.50	kJ/mol	503.00	NIST Webbook
hvapt	16.50	kJ/mol	483.00	NIST Webbook
hvapt	23.70	kJ/mol	453.00	NIST Webbook

hvapt	29.70	kJ/mol	423.00	NIST Webbook
hvapt	39.80	kJ/mol	355.00	NIST Webbook
hvapt	43.20	kJ/mol	338.50	NIST Webbook
hvapt	39.85	kJ/mol	355.40	NIST Webbook
hvapt	39.83	kJ/mol	355.50	KDB
hvapt	39.80	kJ/mol	355.00	NIST Webbook
hvapt	43.40 ± 0.08	kJ/mol	324.11	NIST Webbook
hvapt	41.10	kJ/mol	387.00	NIST Webbook
hvapt	41.70	kJ/mol	339.00	NIST Webbook
hvapt	35.30	kJ/mol	480.50	NIST Webbook
pvap	3677.00	kPa	493.15	Measurement and correlation of vapor-liquid equilibria for the 2-propanol + n-hexane system near the critical
pvap	177.97	kPa	370.40	Vapor-Liquid Equilibrium of Binary Mixtures Containing Isopropyl Acetate and Alkanols at 101.32 kPa
pvap	152.55	kPa	366.10	Vapor-Liquid Equilibrium of Binary Mixtures Containing Isopropyl Acetate and Alkanols at 101.32 kPa
pvap	203.40	kPa	374.20	Vapor-Liquid Equilibrium of Binary Mixtures Containing Isopropyl Acetate and Alkanols at 101.32 kPa
pvap	228.82	kPa	377.60	Vapor-Liquid Equilibrium of Binary Mixtures Containing Isopropyl Acetate and Alkanols at 101.32 kPa
pvap	254.25	kPa	380.80	Vapor-Liquid Equilibrium of Binary Mixtures Containing Isopropyl Acetate and Alkanols at 101.32 kPa

pvap	101.30	kPa	355.33	Vapor Liquid Equilibria for Ternary Mixtures of Isopropyl Alcohol, Isopropyl Acetate, and DMSO at 101.3 kPa
pvap	96.15	kPa	354.17	Vapor Liquid Equilibrium Data for Binary Mixtures of Acetic Acid + Anisole, Acetone + Anisole, and Isopropanol + Anisole at Pressure 96.15 kPa
pvap	101.06	kPa	355.40	Ammonium-Based Ionic Liquid as an Entrainer for the Separation of n-Propanol + Water and Isopropanol + Water Mixtures
pvap	1610.00	kPa	450.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	1640.00	kPa	451.50	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	2030.00	kPa	462.50	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K

pvap	2040.00	kPa	461.50	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	2420.00	kPa	469.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	2460.00	kPa	469.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	2740.00	kPa	477.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	2780.00	kPa	477.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	3060.00	kPa	482.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	3090.00	kPa	482.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K

pvap	3460.00	kPa	489.50	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	3500.00	kPa	489.00	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	3970.00	kPa	494.50	Pressure-Drop Method for Detecting Bubble and Dew Points of Multicomponent Mixtures at Temperatures of up to 573 K
pvap	101.32	kPa	355.60	Acetonitrile Dehydration via Extractive Distillation Using Low Transition Temperature Mixtures as Entrainers
pvap	39.54	kPa	333.72	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	55.03	kPa	340.98	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene

pvap	60.66	kPa	343.19	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	61.30	kPa	343.44	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	65.23	kPa	344.86	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	69.47	kPa	346.33	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	75.27	kPa	348.21	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene



pvap	79.34	kPa	349.48	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	90.34	kPa	352.63	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	93.41	kPa	353.46	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	101.07	kPa	355.42	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene
pvap	3081.00	kPa	483.15	Measurement and correlation of vapor-liquid equilibria for the 2-propanol + n-hexane system near the critical
pvap	4362.00	kPa	503.15	Measurement and correlation of vapor-liquid equilibria for the 2-propanol + n-hexane system near the critical

pvap	36.47	kPa	332.03	Vapor Liquid Equilibrium for the Trans-2-Butene + Methanol, + Ethanol, + 2-Propanol, + 2-Butanol and + 2-Methyl-2-Propanol Systems at 332 K
pvap	23.47	kPa	323.16	Isothermal Vapor Liquid Equilibrium for Binary 2-Methylpropene - C1-C4 Alcohol-Systems
pvap	5.80	kPa	298.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	7.86	kPa	303.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	10.52	kPa	308.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	13.94	kPa	313.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data

pvap	127.12	kPa	361.21	Vapor-Liquid Equilibrium of Binary Mixtures Containing Isopropyl Acetate and Alkanols at 101.32 kPa
pvap	101.54	kPa	355.41	Vapor-Liquid Equilibrium of Binary Mixtures Containing Isopropyl Acetate and Alkanols at 101.32 kPa
pvap	63.92	kPa	344.70	An experimental investigation and modelling of the thermal and caloric properties of nanofluids isopropyl alcohol - Al <sub>2</sub> O <sub>3</sub> nanoparticles
pvap	36.06	kPa	332.10	An experimental investigation and modelling of the thermal and caloric properties of nanofluids isopropyl alcohol - Al <sub>2</sub> O <sub>3</sub> nanoparticles
pvap	16.22	kPa	315.80	An experimental investigation and modelling of the thermal and caloric properties of nanofluids isopropyl alcohol - Al <sub>2</sub> O <sub>3</sub> nanoparticles
pvap	8.00	kPa	303.10	An experimental investigation and modelling of the thermal and caloric properties of nanofluids isopropyl alcohol - Al <sub>2</sub> O <sub>3</sub> nanoparticles
pvap	5.78	kPa	297.80	An experimental investigation and modelling of the thermal and caloric properties of nanofluids isopropyl alcohol - Al <sub>2</sub> O <sub>3</sub> nanoparticles

pvap	101.30	kPa	355.71	A new analysis method for improving collection of vapor-liquid equilibrium (VLE) data of binary mixtures using differential scanning calorimetry (DSC)
pvap	133.65	kPa	362.52	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	132.35	kPa	362.26	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	130.93	kPa	361.98	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	129.08	kPa	361.62	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	127.36	kPa	361.26	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	125.62	kPa	360.90	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	18.24	kPa	318.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	122.11	kPa	360.16	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	120.24	kPa	359.77	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	118.64	kPa	359.43	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	116.64	kPa	358.98	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	115.10	kPa	358.65	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	113.79	kPa	358.35	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	111.88	kPa	357.93	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	110.13	kPa	357.52	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	108.63	kPa	357.16	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	106.91	kPa	356.76	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	105.38	kPa	356.40	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	103.44	kPa	355.93	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	101.28	kPa	355.38	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	100.03	kPa	355.09	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	100.00	kPa	355.09	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	98.05	kPa	354.59	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	96.49	kPa	354.20	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid



pvap	94.46	kPa	353.66	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	92.57	kPa	353.16	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	90.24	kPa	352.54	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	88.63	kPa	352.09	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	87.17	kPa	351.69	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	85.47	kPa	351.21	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	83.94	kPa	350.75	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	81.58	kPa	350.08	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	79.96	kPa	349.61	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	77.81	kPa	348.95	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	75.96	kPa	348.37	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	74.18	kPa	347.79	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	72.04	kPa	347.11	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	70.12	kPa	346.46	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	69.14	kPa	346.13	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	68.03	kPa	345.75	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	66.84	kPa	345.35	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	65.97	kPa	345.05	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	64.96	kPa	344.68	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	63.92	kPa	344.32	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	62.98	kPa	343.96	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	61.94	kPa	343.59	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	60.91	kPa	343.20	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	59.93	kPa	342.82	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	59.04	kPa	342.48	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	58.05	kPa	342.09	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	56.96	kPa	341.69	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	55.92	kPa	341.25	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	55.03	kPa	340.89	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	53.94	kPa	340.43	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	53.01	kPa	340.04	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	52.33	kPa	339.72	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	51.26	kPa	339.30	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	50.25	kPa	338.86	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	49.34	kPa	338.45	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	48.35	kPa	337.98	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	47.28	kPa	337.50	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	46.34	kPa	337.07	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	45.32	kPa	336.55	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	44.38	kPa	336.11	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid



pvap	43.46	kPa	335.64	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	42.44	kPa	335.12	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	41.44	kPa	334.60	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	40.41	kPa	334.10	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	39.33	kPa	333.50	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	38.41	kPa	332.99	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	37.45	kPa	332.44	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	36.37	kPa	331.83	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	35.48	kPa	331.32	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	34.52	kPa	330.73	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	33.77	kPa	330.26	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	32.76	kPa	329.64	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	31.86	kPa	329.06	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	30.96	kPa	328.47	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	30.08	kPa	327.86	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	29.45	kPa	327.46	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	28.83	kPa	326.99	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	28.19	kPa	326.53	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	27.69	kPa	326.18	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	27.08	kPa	325.72	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	26.52	kPa	325.30	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	26.04	kPa	324.94	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	25.48	kPa	324.49	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	25.03	kPa	324.13	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	24.51	kPa	323.71	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	24.02	kPa	323.32	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	23.52	kPa	322.91	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	23.03	kPa	322.47	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	22.55	kPa	322.07	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	22.03	kPa	321.58	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	21.49	kPa	321.11	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	21.00	kPa	320.65	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	20.52	kPa	320.19	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	20.03	kPa	319.72	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	19.48	kPa	319.19	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid

pvap	19.01	kPa	318.73	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	18.39	kPa	318.10	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	17.98	kPa	317.65	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	17.46	kPa	317.07	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid
pvap	101.30	kPa	355.45	Isobaric (vapour + liquid) equilibrium for (2-propanol + water + ammonium thiocyanate): Fitting the data by an empirical equation



pvap	101.00	kPa	355.40	Experimental studies and thermodynamic analysis of isobaric vapor-liquid-liquid equilibria of 2-propanol + water system using n-propyl acetate and isopropyl acetate as entrainers
pvap	593.80	kPa	408.30	Isothermal vapor liquid equilibrium for binary mixtures containing furfural and its derivatives
pvap	200.10	kPa	373.50	Isothermal vapor liquid equilibrium for binary mixtures containing furfural and its derivatives
pvap	93.80	kPa	353.30	Isothermal vapor liquid equilibrium for binary mixtures containing furfural and its derivatives
pvap	101.30	kPa	355.15	Multiphase equilibria for mixtures containing water, isopropanol, propionic acid, and isopropyl propionate
pvap	144.10	kPa	364.50	Vapour liquid equilibrium for the systems butane + methanol, +2-propanol, +1-butanol, +2-butanol, +2-methyl-2-propanol at 364.5K
pvap	13.77	kPa	313.11	Vapour liquid equilibrium for the 2-methylpropane + methanol, +ethanol, +2-propanol, +2-butanol and +2-methyl-2-propanol systems at 313.15K

pvap	23.64	kPa	323.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	30.35	kPa	328.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	38.59	kPa	333.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	48.66	kPa	338.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	60.66	kPa	343.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data

pvap	75.22	kPa	348.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	92.44	kPa	353.15	Vapor-Pressure Measurements of Liquid Solutions at Different Temperatures: Apparatus for Use over an Extended Temperature Range and Some New Data
pvap	144.50	kPa	364.50	Isothermal Vapor Liquid Equilibrium for 2-Methylpropene + Methanol, + 1-Propanol, + 2-Propanol, + 2-Butanol, and + 2-Methyl-2-propanol Binary Systems at 364.5 K
pvap	7.93	kPa	303.15	Solubility of Carbonyl Sulfide in Aqueous Solutions of Ethylene Glycol at Temperatures from (308.15 K to 323.15) K
pvap	10.72	kPa	308.15	Solubility of Carbonyl Sulfide in Aqueous Solutions of Ethylene Glycol at Temperatures from (308.15 K to 323.15) K
pvap	101.30	kPa	355.35	Isobaric Vapor-Liquid Equilibrium for Binary Systems of Toluene + Ethanol, Toluene + Isopropanol at (101.3, 121.3, 161.3 and 201.3) kPa

pvap	121.30	kPa	359.95	Isobaric Vapor-Liquid Equilibrium for Binary Systems of Toluene + Ethanol, Toluene + Isopropanol at (101.3, 121.3, 161.3 and 201.3) kPa
pvap	161.30	kPa	367.65	Isobaric Vapor-Liquid Equilibrium for Binary Systems of Toluene + Ethanol, Toluene + Isopropanol at (101.3, 121.3, 161.3 and 201.3) kPa
pvap	201.30	kPa	373.65	Isobaric Vapor-Liquid Equilibrium for Binary Systems of Toluene + Ethanol, Toluene + Isopropanol at (101.3, 121.3, 161.3 and 201.3) kPa
pvap	60.00	kPa	342.87	Isobaric Vapor Liquid Equilibria for the 2-Propanol + Ethylene Glycol Monopropyl Ether and 2-Butanol + Ethylene Glycol Monopropyl Ether Systems at 60 kPa, 80 kPa, and 100 kPa
pvap	80.00	kPa	349.60	Isobaric Vapor Liquid Equilibria for the 2-Propanol + Ethylene Glycol Monopropyl Ether and 2-Butanol + Ethylene Glycol Monopropyl Ether Systems at 60 kPa, 80 kPa, and 100 kPa

pvap	100.00	kPa	355.06	Isobaric Vapor Liquid Equilibria for the 2-Propanol + Ethylene Glycol Monopropyl Ether and 2-Butanol + Ethylene Glycol Monopropyl Ether Systems at 60 kPa, 80 kPa, and 100 kPa
pvap	23.60	kPa	323.19	Vapor Liquid Equilibrium for Butane + Methanol, + Ethanol, + 2-Propanol, + 2-Butanol, and + 2-Methyl-2-Propanol (TBA) at 323 K
pvap	144.10	kPa	364.51	Vapor Liquid Equilibrium for the Systems trans-2-Butene + Methanol, + 1-Propanol, + 2-Propanol, + 2-Butanol, and + 2-Methyl-2-propanol at 364.5 K
pvap	144.20	kPa	364.51	Vapor Liquid Equilibrium for the Systems 2-Methylpropane + Methanol, + 2-Propanol, + 2-Butanol, and + 2-Methyl-2-propanol at 364.5 K
pvap	143.90	kPa	364.52	Vapor-Liquid Equilibrium for the cis-2-Butene + Methanol, + 2-Propanol, + 2-Butanol, + 2-Methyl-2-propanol Systems at 364.5 K
pvap	40.00	kPa	333.94	Isobaric Vapor-Liquid Equilibria for Tetrahydropyran and Alcohol Systems
pvap	53.33	kPa	340.18	Isobaric Vapor-Liquid Equilibria for Tetrahydropyran and Alcohol Systems

pvap	66.66	kPa	345.25	Isobaric Vapor-Liquid Equilibria for Tetrahydropyran and Alcohol Systems	
pvap	79.99	kPa	349.55	Isobaric Vapor-Liquid Equilibria for Tetrahydropyran and Alcohol Systems	
pvap	93.32	kPa	353.30	Isobaric Vapor-Liquid Equilibria for Tetrahydropyran and Alcohol Systems	
pvap	98.66	kPa	354.67	Isobaric Vapor-Liquid Equilibria for Tetrahydropyran and Alcohol Systems	
pvap	101.32	kPa	355.65	Isobaric Vapor-Liquid Equilibrium for (Propan-2-ol + Water + 1-Butyl-3-methylimidazolium Tetrafluoroborate)	
pvap	85.15	kPa	351.19	Vapor-Liquid Equilibrium Data at 343 K and Excess Molar Enthalpy Data at 298 K for the Binary Systems of Ethanol + 2,4,4-Trimethyl-1-pentene and 2-Propanol + 2,4,4-Trimethyl-1-pentene	
pvap	124.03	kPa	360.57	Isobaric vapor-liquid equilibria for the extractive distillation of 2-propanol + water mixtures using 1-ethyl-3-methylimidazolium dicyanamide ionic liquid	
rfi	1.37450		298.15	Densities, Viscosities, and Refractive Indices of Binary Mixtures of Acetophenone and 2-Alkanols	

rfi	1.37740	293.15	Vapor liquid equilibria and excess volumes of the binary systems ethanol + ethyl lactate, isopropanol + isopropyl lactate and n-butanol + n-butyl lactate at 101.325 kPa
rfi	1.37520	298.15	Effect of anion fluorination in 1-ethyl-3-methylimidazolium as solvent for the liquid extraction of ethanol from ethyl tert-butyl ether
rfi	1.37520	298.15	Activity coefficients of the binary mixtures of a-cresol or p-cresol with C1-C4 aliphatic alcohols near ambient pressure
rfi	1.37500	298.15	Excess volumes and excess enthalpies of N-methyl-2-pyrrolidone with branched alcohols
rfi	1.37540	298.15	Effect of pressure and the capability of 2-methoxyethanol as a solvent in the behaviour of a diisopropyl ether isopropyl alcohol azeotropic mixture
rfi	1.37504	298.15	Isothermal vapour liquid equilibria in the binary and ternary systems composed of 2-propanol, 3-methyl-2-butanone and 2,2,4-trimethylpentane
rfi	1.37497	298.15	Isobaric vapour liquid equilibria for binary systems of 2-butanone with ethanol, 1-propanol, and 2-propanol at 20 and 101.3 kPa

rfi	1.37502	298.15	Isobaric vapour liquid equilibria and physical properties for isopropyl acetate + isopropanol + 1-butyl-3-methyl-imidazolium bis(trifluoromethylsulfonyl)imide mixtures
rfi	1.37760	298.15	Investigation on vapor liquid equilibrium for 2-propanol + 1-butanol + 1-pentanol at 101.3 kPa
rfi	1.37740	293.15	Vapour-liquid equilibrium of carboxylic acid alcohol binary systems: 2-Propanol + butyric acid, 2-butanol + butyric acid and 2-methyl-1-propanol + butyric acid
rfi	1.37480	298.15	Excess molar volumes and partial molar volumes for (propionitrile + an alkanol) at T = 298.15 K and p = 0.1 MPa
rfi	1.37650	298.15	Physico-chemical and excess properties of the binary mixtures of methylcyclohexane + ethanol, + propan-1-ol, + propan-2-ol, + butan-1-ol, + 2-methyl-1-propanol, or 3-methyl-1-butanol at T = (298.15, 303.15, and 308.15) K



rfi	1.37410	303.15	Physico-chemical and excess properties of the binary mixtures of methylcyclohexane + ethanol, + propan-1-ol, + propan-2-ol, + butan-1-ol, + 2-methyl-1-propanol, or 3-methyl-1-butanol at T = (298.15, 303.15, and 308.15) K
rfi	1.37160	308.15	Physico-chemical and excess properties of the binary mixtures of methylcyclohexane + ethanol, + propan-1-ol, + propan-2-ol, + butan-1-ol, + 2-methyl-1-propanol, or 3-methyl-1-butanol at T = (298.15, 303.15, and 308.15) K
rfi	1.37450	298.15	Thermodynamic properties of (tetradecane + benzene, + toluene, + chlorobenzene, + bromobenzene, + anisole) binary mixtures at T = (298.15, 303.15, and 308.15) K
rfi	1.37210	303.15	Thermodynamic properties of (tetradecane + benzene, + toluene, + chlorobenzene, + bromobenzene, + anisole) binary mixtures at T = (298.15, 303.15, and 308.15) K
rfi	1.37020	308.15	Thermodynamic properties of (tetradecane + benzene, + toluene, + chlorobenzene, + bromobenzene, + anisole) binary mixtures at T = (298.15, 303.15, and 308.15) K

rfi	1.37520	298.15	(Vapor + liquid) equilibria of the binary mixtures of m-cresol with C1 C4 aliphatic alcohols at 95.5 kPa
rfi	1.37450	298.15	Thermodynamic interactions in binary mixtures of anisole with ethanol, propan-1-ol, propan-2-ol, butan-1-ol, pentan-1-ol, and 3-methylbutan-1-ol at T = (298.15, 303.15, and 308.15) K
rfi	1.37210	303.15	Thermodynamic interactions in binary mixtures of anisole with ethanol, propan-1-ol, propan-2-ol, butan-1-ol, pentan-1-ol, and 3-methylbutan-1-ol at T = (298.15, 303.15, and 308.15) K
rfi	1.37020	308.15	Thermodynamic interactions in binary mixtures of anisole with ethanol, propan-1-ol, propan-2-ol, butan-1-ol, pentan-1-ol, and 3-methylbutan-1-ol at T = (298.15, 303.15, and 308.15) K
rfi	1.37707	293.15	Mixing properties of binary mixtures presenting azeotropes at several temperatures
rfi	1.37496	298.15	Mixing properties of binary mixtures presenting azeotropes at several temperatures

rfi	1.37278	303.15	Mixing properties of binary mixtures presenting azeotropes at several temperatures
rfi	1.37510	298.15	(Vapor + liquid) equilibrium of the binary mixtures formed by acetonitrile with selected compounds at 95.5 kPa
rfi	1.37496	298.15	Ternary (liquid + liquid) equilibria of the azeotrope (ethyl acetate + 2-propanol) with different ionic liquids at T = 298.15 K
rfi	1.37500	298.15	Isobaric (vapour + liquid) equilibrium for N-methyl-2-pyrrolidone with branched alcohols
rfi	1.37410	298.15	Application of the ERAS model to volumetric properties of binary mixtures of banana oil with primary and secondary alcohols (C1- C4) at different temperatures
rfi	1.37500	298.15	Effect of the temperature on the physical properties of pure 1-propyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide and characterization of its binary mixtures with alcohols
rfi	1.37504	298.15	Isothermal (vapour + liquid) equilibria in the binary and ternary systems composed of 2-propanol, 2,2,4-trimethylpentane, and 2,4-dimethyl-3-pentanone

rfi	1.37518	298.15	(Vapour + liquid) equilibria for binary and ternary mixtures of 2-propanol, tetrahydropyran, and 2,2,4-trimethylpentane at P = 101.3 kPa
rfi	1.37410	303.15	Experimental study on the calorimetric data of cyclohexanol with alkanols (C1-C4) and correlation with Wilson, NRTL and UNIQUAC models at 300 K
rfi	1.37527	298.15	Densities, speeds of sound, and refractive indices for binary mixtures of 1-butyl-3-methylimidazolium methyl sulphate ionic liquid with alcohols at T = (298.15, 303.15, 308.15, and 313.15) K
rfi	1.37314	303.15	Densities, speeds of sound, and refractive indices for binary mixtures of 1-butyl-3-methylimidazolium methyl sulphate ionic liquid with alcohols at T = (298.15, 303.15, 308.15, and 313.15) K
rfi	1.37093	308.15	Densities, speeds of sound, and refractive indices for binary mixtures of 1-butyl-3-methylimidazolium methyl sulphate ionic liquid with alcohols at T = (298.15, 303.15, 308.15, and 313.15) K

rfi	1.36870	313.15	Densities, speeds of sound, and refractive indices for binary mixtures of 1-butyl-3-methylimidazolium methyl sulphate ionic liquid with alcohols at T = (298.15, 303.15, 308.15, and 313.15) K
rfi	1.37523	298.15	Effect of the temperature on the physical properties of the pure ionic liquid 1-ethyl-3-methylimidazolium methylsulfate and characterization of its binary mixtures with alcohols
rfi	1.37560	298.15	Ternary (liquid + liquid) equilibria for the extraction of ethanol, or 2-propanol from aqueous solutions with 1,1'-oxybis(butane) at different temperatures
rfi	1.37660	293.15	Densities, viscosities, excess molar volumes, and refractive indices of acetonitrile and 2-alkanols binary mixtures at different temperatures: Experimental results and application of the Prigogine Flory Patterson theory
rfi	1.37450	298.15	Densities, viscosities, excess molar volumes, and refractive indices of acetonitrile and 2-alkanols binary mixtures at different temperatures: Experimental results and application of the Prigogine Flory Patterson theory

rfi	1.37240	303.15	Densities, viscosities, excess molar volumes, and refractive indices of acetonitrile and 2-alkanols binary mixtures at different temperatures: Experimental results and application of the Prigogine Flory Patterson theory
rfi	1.37030	308.15	Densities, viscosities, excess molar volumes, and refractive indices of acetonitrile and 2-alkanols binary mixtures at different temperatures: Experimental results and application of the Prigogine Flory Patterson theory
rfi	1.37360	303.15	Solute-Solvent and Solvent-Solvent Interactions of Menthol in Isopropyl Alcohol and its Binary Mixtures with Methyl Salicylate by Volumetric, Viscometric, Interferometric and Refractive Index Techniques.
rfi	1.37530	298.15	Molar excess enthalpies and molar excess volumes of formamide + 1-propanol or 2-propanol and thermodynamic modeling by Prigogine-Flory-Patterson theory and Treszczanowicz-Benson association model

rfi	1.37710	293.20	Isobaric Vapor Liquid Equilibria for Binary Mixtures of .gamma.-Valerolactone + Methanol, Ethanol, and 2-Propanol
rfi	1.37510	298.20	Isobaric Vapor Liquid Equilibria for Binary Mixtures of .gamma.-Valerolactone + Methanol, Ethanol, and 2-Propanol
rfi	1.37718	293.15	Vapor Liquid Equilibrium for Methyl Isobutyl Ketone (MIBK) + (1-Propanol or 2-Propanol) Binary Mixtures
rfi	1.37740	293.15	Excess Properties and Phase Equilibria for the Potential Biofuel System of Propan-2-ol and 2-Methyl-propan-1-ol at 333.15, 343.15, and 353.15 K
rfi	1.37580	298.00	Determination of Physicochemical Parameters of Sodium Dodecyl Sulfate in Aqueous Micellar Solutions Containing Short-Chain Alcohols
rfi	1.37740	293.15	Solid-Liquid Equilibrium Measurements for Posaconazole and Voriconazole in Several Solvents between T = 278.2 and 323.2 K Using Differential Thermal Analysis/Thermal Gravimetric Analysis

rfi	1.38000	298.15	Bubble Temperatures of the Binary Mixtures of Dimethylcarbonate with Some Alcohols at 95.8 kPa
rfi	1.37500	298.15	Vapor-Liquid Equilibria Data for Methanol + 2-Propanol+ 2-Methyl-2-butanol and Constituent Binary Systems at 101.3 kPa
rfi	1.37707	293.15	Thermodynamic Properties of Ionic Liquids in Organic Solvents from (293.15 to 303.15) K
rfi	1.37496	298.15	Thermodynamic Properties of Ionic Liquids in Organic Solvents from (293.15 to 303.15) K
rfi	1.37278	303.15	Thermodynamic Properties of Ionic Liquids in Organic Solvents from (293.15 to 303.15) K
rfi	1.37500	298.15	Densities, Excess Molar Volumes, and Refractive Properties of the Binary Mixtures of the Amino Acid Ionic Liquid [bmim][Gly] with 1-Butanol or Isopropanol at T = (298.15 to 313.15) K
rfi	1.37400	303.15	Densities, Excess Molar Volumes, and Refractive Properties of the Binary Mixtures of the Amino Acid Ionic Liquid [bmim][Gly] with 1-Butanol or Isopropanol at T = (298.15 to 313.15) K



rfi	1.37300	308.15	Densities, Excess Molar Volumes, and Refractive Properties of the Binary Mixtures of the Amino Acid Ionic Liquid [bmim][Gly] with 1-Butanol or Isopropanol at T = (298.15 to 313.15) K
rfi	1.37200	313.15	Densities, Excess Molar Volumes, and Refractive Properties of the Binary Mixtures of the Amino Acid Ionic Liquid [bmim][Gly] with 1-Butanol or Isopropanol at T = (298.15 to 313.15) K
rfi	1.37709	293.15	Liquid Liquid Equilibria of Methanol, Ethanol, and Propan-2-ol with Water and Dodecane
rfi	1.37510	298.15	Physical Properties of Binary and Ternary Mixtures of 2-Propanol, Water, and 1-Butyl-3-methylimidazolium Tetrafluoroborate Ionic Liquid
rfi	1.36040	323.15	Physical Properties of Binary and Ternary Mixtures of 2-Propanol, Water, and 1-Butyl-3-methylimidazolium Tetrafluoroborate Ionic Liquid
rfi	1.37710	293.20	Vapor Liquid Equilibrium Data for Binary Systems of 1-Methyl-4-(1-methylethenyl)-cyclohexene + {Ethanol, Propan-1-ol, Propan-2-ol, Butan-1-ol, Pentan-1-ol, or Hexan-1-ol} at 40 kPa

rfi	1.37880	295.15	Isobaric Vapor Liquid Equilibrium Data for Binary Mixtures of 1-Phenylethanone with a Few Alcohols at 95.2 kPa
rfi	1.35540	298.15	Vapor Liquid Equilibrium for Ternary and Binary Mixtures of 2-Isopropoxypropane, 2-Propanol, and N,N-Dimethylacetamide at 101.3 kPa
rfi	1.37495	298.15	Physical Properties of Binary Mixtures of the Ionic Liquid 1-Ethyl-3-methylimidazolium Ethyl Sulfate with Several Alcohols at T = (298.15, 313.15, and 328.15) K and Atmospheric Pressure
rfi	1.37496	298.15	Ternary Liquid-Liquid Equilibria Ethanol + 2-Butanone + 1-Butyl-3-methylimidazolium Hexafluorophosphate, 2-Propanol + 2-Butanone + 1-Butyl-3-methylimidazolium Hexafluorophosphate, and 2-Butanone + 2-Propanol + 1,3-Dimethylimidazolium Methyl Sulfate at 298.15 K
rfi	1.37520	298.15	Vapor-Liquid Equilibrium and Excess Gibbs Energies of Hexane + N,N-Dimethyl Formamide, 2-Methylpropan-2-ol + 2-Aminophenol, N,N-Dimethyl Formamide, and 2-Propanol + Diisopropyl Amine at 94.4 kPa

rfi	1.37500	298.15	Density and Viscosity Experimental Data of the Ternary Mixtures 1-Propanol or 2-Propanol + Water + 1-Ethyl-3-methylimidazolium Ethylsulfate. Correlation and Prediction of Physical Properties of the Ternary Systems
rfi	1.37063	308.15	Densities, Viscosities, Refractive Indices, and Surface Tensions for the Ternary Mixtures of 2-Propanol + Benzyl Alcohol + 2-Phenylethanol at T = 308.15 K
rfi	1.37540	298.15	Isobaric Vapor-Liquid Equilibria for Binary and Ternary Mixtures of Diisopropyl Ether, 2-Propyl Alcohol, and 3-Methyl-1-Butanol
rfi	1.37800	293.15	Measurement and Correlation of the Solubilities of m-Phthalic Acid in Monobasic Alcohols
rfi	1.37540	298.15	Isobaric Vapor-Liquid Equilibria for Binary and Ternary Mixtures of Diisopropyl Ether, 2-Propyl Alcohol, and n-Butyl Propionate at 101.3 kPa
rfi	1.37509	298.15	Vapor-Liquid Equilibria for Binary and Ternary Mixtures of 1,3-Dioxolane, 2-Propanol, and 2,2,4-Trimethylpentane at 101.3 kPa

rfi	1.37540		298.15	Isobaric Vapor-Liquid Equilibria for Binary and Ternary Mixtures of Ethanol and 2-Propanol with 2-Butanone and Butyl Propionate at 101.3 kPa
rhoI	780.99	kg/m3	298.15	Volumetric properties of binary liquid mixtures of alcohols with 1,2-dichloroethane at different temperatures and atmospheric pressure
rhoI	758.60	kg/m3	323.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures
rhoI	753.80	kg/m3	328.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures
rhoI	748.90	kg/m3	333.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures

rhoI	789.34	kg/m3	288.15	Excess Molar Volumes of 1,3-Diethyl Propanedioate with Methanol, Ethanol, Propan-1-ol, Propan-2-ol, Butan-2-ol, 2-Methyl-propan-1-ol, and Pentan-1-ol at T = (288.15, 298.15, 313.15, and 328.15) K
rhoI	780.99	kg/m3	298.15	Excess Molar Volumes of 1,3-Diethyl Propanedioate with Methanol, Ethanol, Propan-1-ol, Propan-2-ol, Butan-2-ol, 2-Methyl-propan-1-ol, and Pentan-1-ol at T = (288.15, 298.15, 313.15, and 328.15) K
rhoI	767.92	kg/m3	313.15	Excess Molar Volumes of 1,3-Diethyl Propanedioate with Methanol, Ethanol, Propan-1-ol, Propan-2-ol, Butan-2-ol, 2-Methyl-propan-1-ol, and Pentan-1-ol at T = (288.15, 298.15, 313.15, and 328.15) K
rhoI	754.00	kg/m3	328.15	Excess Molar Volumes of 1,3-Diethyl Propanedioate with Methanol, Ethanol, Propan-1-ol, Propan-2-ol, Butan-2-ol, 2-Methyl-propan-1-ol, and Pentan-1-ol at T = (288.15, 298.15, 313.15, and 328.15) K
rhoI	781.05	kg/m3	298.15	Densities, Viscosities, and Speeds of Sound of Binary Liquid Mixtures of Ethylenediamine with Alcohols at T = (293.15 to 313.15) K

rhoI	781.23	kg/m3	298.15	ACSExcess Molar Enthalpies of Mixtures of (+)-Linalool with Several Alkanols	
rhoI	781.60	kg/m3	298.15	Thermophysical Properties of the Pure Ionic Liquid 1-Butyl-1-methylpyrrolidinium Dicyanamide and Its Binary Mixtures with Alcohols	
rhoI	785.35	kg/m3	293.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure	
rhoI	776.86	kg/m3	303.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure	
rhoI	768.07	kg/m3	313.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure	
rhoI	758.89	kg/m3	323.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure	
rhoI	749.25	kg/m3	333.15	Density and Viscosity Measurements of Binary Alkanol Mixtures from (293.15 to 333.15) K at Atmospheric Pressure	

rhoI	794.00	kg/m3	283.15	Densities and Excess Properties of Primary Amines in Alcoholic Solutions
rhoI	785.76	kg/m3	293.15	Densities and Excess Properties of Primary Amines in Alcoholic Solutions
rhoI	777.28	kg/m3	303.15	Densities and Excess Properties of Primary Amines in Alcoholic Solutions
rhoI	768.48	kg/m3	313.15	Densities and Excess Properties of Primary Amines in Alcoholic Solutions
rhoI	759.31	kg/m3	323.15	Densities and Excess Properties of Primary Amines in Alcoholic Solutions
rhoI	749.68	kg/m3	333.15	Densities and Excess Properties of Primary Amines in Alcoholic Solutions
rhoI	739.53	kg/m3	343.15	Densities and Excess Properties of Primary Amines in Alcoholic Solutions
rhoI	786.00	kg/m3	293.15	Composition and Temperature Dependence of Density, Surface Tension, and Viscosity of EMIM DEP/MMIM DMP + Water + 1-Propanol/2-Propanol Ternary Mixtures and Their Mathematical Representation Using the Jouyban Acree Model

rhoI	781.00	kg/m3	298.15	Composition and Temperature Dependence of Density, Surface Tension, and Viscosity of EMIM DEP/MMIM DMP + Water + 1-Propanol/2-Propanol Ternary Mixtures and Their Mathematical Representation Using the Jouyban Acree Model
rhoI	777.00	kg/m3	303.15	Composition and Temperature Dependence of Density, Surface Tension, and Viscosity of EMIM DEP/MMIM DMP + Water + 1-Propanol/2-Propanol Ternary Mixtures and Their Mathematical Representation Using the Jouyban Acree Model
rhoI	768.00	kg/m3	313.15	Composition and Temperature Dependence of Density, Surface Tension, and Viscosity of EMIM DEP/MMIM DMP + Water + 1-Propanol/2-Propanol Ternary Mixtures and Their Mathematical Representation Using the Jouyban Acree Model



rhoI	759.00	kg/m3	323.15	Composition and Temperature Dependence of Density, Surface Tension, and Viscosity of EMIM DEP/MMIM DMP + Water + 1-Propanol/2-Propanol Ternary Mixtures and Their Mathematical Representation Using the Jouyban Acree Model
rhoI	750.00	kg/m3	333.15	Composition and Temperature Dependence of Density, Surface Tension, and Viscosity of EMIM DEP/MMIM DMP + Water + 1-Propanol/2-Propanol Ternary Mixtures and Their Mathematical Representation Using the Jouyban Acree Model
rhoI	779.36	kg/m3	298.15	Vapor Liquid Equilibrium of Mixtures Containing the Following Higher Alcohols: 2-Propanol, 2-Methyl-1-propanol, and 3-Methyl-1-butanol
rhoI	781.10	kg/m3	298.15	Thermodynamic Properties of Binary Mixtures Containing N,N-Dimethylacetamide + 2-Alkanol: Experimental Data and Modeling
rhoI	776.80	kg/m3	303.15	Thermodynamic Properties of Binary Mixtures Containing N,N-Dimethylacetamide + 2-Alkanol: Experimental Data and Modeling

rhoI	772.40	kg/m3	308.15	Thermodynamic Properties of Binary Mixtures Containing N,N-Dimethylacetamide + 2-Alkanol: Experimental Data and Modeling
rhoI	767.80	kg/m3	313.15	Thermodynamic Properties of Binary Mixtures Containing N,N-Dimethylacetamide + 2-Alkanol: Experimental Data and Modeling
rhoI	785.24	kg/m3	293.15	Measurement and Correlation of the Excess Properties of Ternary Mixture of {x1[Hmim][BF4] + x21-Propanol + x32-Propanol} at Different Temperatures
rhoI	776.76	kg/m3	303.15	Measurement and Correlation of the Excess Properties of Ternary Mixture of {x1[Hmim][BF4] + x21-Propanol + x32-Propanol} at Different Temperatures
rhoI	767.96	kg/m3	313.15	Measurement and Correlation of the Excess Properties of Ternary Mixture of {x1[Hmim][BF4] + x21-Propanol + x32-Propanol} at Different Temperatures
rhoI	758.79	kg/m3	323.15	Measurement and Correlation of the Excess Properties of Ternary Mixture of {x1[Hmim][BF4] + x21-Propanol + x32-Propanol} at Different Temperatures

rhoI	749.16	kg/m3	333.15	Measurement and Correlation of the Excess Properties of Ternary Mixture of {x1[Hmim][BF4] + x21-Propanol + x32-Propanol} at Different Temperatures
rhoI	785.30	kg/m3	293.15	Densities and Viscosities of Binary Mixtures Containing 1,3-Dimethylimidazolium Dimethylphosphate and Alcohols
rhoI	781.09	kg/m3	298.15	Densities and Viscosities of Binary Mixtures Containing 1,3-Dimethylimidazolium Dimethylphosphate and Alcohols
rhoI	776.80	kg/m3	303.15	Densities and Viscosities of Binary Mixtures Containing 1,3-Dimethylimidazolium Dimethylphosphate and Alcohols
rhoI	772.43	kg/m3	308.15	Densities and Viscosities of Binary Mixtures Containing 1,3-Dimethylimidazolium Dimethylphosphate and Alcohols
rhoI	767.99	kg/m3	313.15	Densities and Viscosities of Binary Mixtures Containing 1,3-Dimethylimidazolium Dimethylphosphate and Alcohols
rhoI	763.47	kg/m3	318.15	Densities and Viscosities of Binary Mixtures Containing 1,3-Dimethylimidazolium Dimethylphosphate and Alcohols
rhoI	758.85	kg/m3	323.15	Densities and Viscosities of Binary Mixtures Containing 1,3-Dimethylimidazolium Dimethylphosphate and Alcohols

rhoI	777.50	kg/m3	303.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhoI	768.80	kg/m3	313.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhoI	759.70	kg/m3	323.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhoI	750.00	kg/m3	333.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhoI	739.50	kg/m3	343.15	Density, Viscosities, and Excess Properties for Binary Mixtures of Sulfolane + Alcohols and Sulfolane + Glycols at Different Temperatures
rhoI	785.40	kg/m3	293.15	Densities and Viscosities of Binary Mixtures Containing Ethyl Formate and 2-Alkanols: Friction Theory and Free Volume Theory

rhoI	781.10	kg/m3	298.15	Densities and Viscosities of Binary Mixtures Containing Ethyl Formate and 2-Alkanols: Friction Theory and Free Volume Theory
rhoI	776.80	kg/m3	303.15	Densities and Viscosities of Binary Mixtures Containing Ethyl Formate and 2-Alkanols: Friction Theory and Free Volume Theory
rhoI	772.40	kg/m3	308.15	Densities and Viscosities of Binary Mixtures Containing Ethyl Formate and 2-Alkanols: Friction Theory and Free Volume Theory
rhoI	768.00	kg/m3	313.15	Densities and Viscosities of Binary Mixtures Containing Ethyl Formate and 2-Alkanols: Friction Theory and Free Volume Theory
rhoI	763.40	kg/m3	318.15	Densities and Viscosities of Binary Mixtures Containing Ethyl Formate and 2-Alkanols: Friction Theory and Free Volume Theory
rhoI	758.80	kg/m3	323.15	Densities and Viscosities of Binary Mixtures Containing Ethyl Formate and 2-Alkanols: Friction Theory and Free Volume Theory

rho	781.32	kg/m <sup>3</sup>	298.15	Liquid-Liquid Equilibrium for Ternary Systems of Propyl Vinyl Ether + C <sub>3</sub> or C <sub>4</sub> Alcohols + Water at 298.15 K and Excess Molar Enthalpies for Ternary and Constituent Binary Systems of Propyl Vinyl Ether + Ethanol + Isooctane at 303.15 K
rho	781.40	kg/m <sup>3</sup>	298.15	Liquid-Liquid Equilibrium for 2,2,2-Trifluoroethanol + Ethanol + Cyclohexane from (288.15 to 308.15) K
rho	785.10	kg/m <sup>3</sup>	293.15	Volumetric Properties of Binary and Ternary Liquid Mixtures of 1-Propanol (1) + 2-Propanol (2) + Water (3) at Different Temperatures and Ambient Pressure (81.5 kPa)
rho	776.63	kg/m <sup>3</sup>	303.15	Volumetric Properties of Binary and Ternary Liquid Mixtures of 1-Propanol (1) + 2-Propanol (2) + Water (3) at Different Temperatures and Ambient Pressure (81.5 kPa)
rho	767.84	kg/m <sup>3</sup>	313.15	Volumetric Properties of Binary and Ternary Liquid Mixtures of 1-Propanol (1) + 2-Propanol (2) + Water (3) at Different Temperatures and Ambient Pressure (81.5 kPa)

rhoI	758.68	kg/m3	323.15	Volumetric Properties of Binary and Ternary Liquid Mixtures of 1-Propanol (1) + 2-Propanol (2) + Water (3) at Different Temperatures and Ambient Pressure (81.5 kPa)
rhoI	781.40	kg/m3	298.15	Liquid-Liquid Equilibrium of (Cyclohexane + 2,2,2-Trifluoroethanol) and (Cyclohexane + Methanol) from (278.15 to 318.15) K
rhoI	781.40	kg/m3	298.15	Effect of Temperature on Phase Equilibrium of the Mixed-Solvent System of (2,2,2-Trifluoroethanol + Methanol + Cyclohexane)
rhoI	781.35	kg/m3	298.15	Binary Liquid-Liquid Equilibrium (LLE) for Dibutyl Ether (DBE) + Water from (288.15 to 318.15) K and Ternary LLE for Systems of DBE + C1 less than C4 Alcohols + Water at 298.15 K
rhoI	781.34	kg/m3	298.15	Binary Liquid-Liquid Equilibrium (LLE) for Methyl tert-Amyl Ether (TAME) + Water from (288.15 to 313.15) K and Ternary LLE for Systems of TAME + C1-C4 Alcohols + Water at 298.15 K

rhoI	781.50	kg/m3	298.15	Solubility and Liquid-Liquid Equilibrium of Aqueous Systems of Iodoethane with Methanol, Ethanol, or 1-Propanol at Temperature 298.15 K and Pressure 101.2 kPa
rhoI	780.90	kg/m3	298.15	Apparent Molal Volumes and Viscosity B-Coefficients of Acetyl Salicylic Acid (2-Acetoxy Benzoic Acid) Solutions in Higher Alcohols at Different Temperatures
rhoI	780.89	kg/m3	298.15	Refractive Indices and Deviations in Refractive Indices for Binary Mixtures of 1-Ethyl-3-methylimidazolium Trifluoromethanesulfonate with Methanol, Ethanol, 1-Propanol, and 2-Propanol at Several Temperatures
rhoI	780.98	kg/m3	298.15	Topological investigations of the molecular species and molecular interactions that characterize pyrrolidin-2-one + lower alkanol mixtures
rhoI	780.35	kg/m3	298.15	Excess enthalpies of binary mixtures of some propylamines + some propanols at 298.15K



rhoI	749.39	kg/m3	333.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K	
rhoI	754.26	kg/m3	328.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K	
rhoI	759.01	kg/m3	323.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K	
rhoI	763.65	kg/m3	318.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K	
rhoI	768.18	kg/m3	313.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K	

rhoI	772.62	kg/m3	308.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K
rhoI	776.97	kg/m3	303.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K
rhoI	781.24	kg/m3	298.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K
rhoI	785.44	kg/m3	293.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K
rhoI	789.58	kg/m3	288.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K

rhoI	793.67	kg/m3	283.15	Properties of pure 1-(3-(trimethylammonio)prop-1-yl)-3-methylimidazolium bis(dicyanamide) asymmetrical gemini ionic liquid and its binary mixture with isopropanol at T = (283.15 333.15) K
rhoI	780.95	kg/m3	298.15	Excess volumes and partial molar volumes of binary liquid mixtures of furfural or 2-methylfuran with alcohols at 298.15 K
rhoI	758.55	kg/m3	323.15	Volumetric properties of monoethanolamine and alcohol binary mixtures at different temperatures and 0.1 MPa
rhoI	763.19	kg/m3	318.15	Volumetric properties of monoethanolamine and alcohol binary mixtures at different temperatures and 0.1 MPa
rhoI	767.82	kg/m3	313.15	Volumetric properties of monoethanolamine and alcohol binary mixtures at different temperatures and 0.1 MPa
rhoI	772.24	kg/m3	308.15	Volumetric properties of monoethanolamine and alcohol binary mixtures at different temperatures and 0.1 MPa
rhoI	776.57	kg/m3	303.15	Volumetric properties of monoethanolamine and alcohol binary mixtures at different temperatures and 0.1 MPa

rhoI	780.91	kg/m3	298.15	Volumetric properties of monoethanolamine and alcohol binary mixtures at different temperatures and 0.1 MPa
rhoI	785.10	kg/m3	293.15	Volumetric properties of monoethanolamine and alcohol binary mixtures at different temperatures and 0.1 MPa
rhoI	753.91	kg/m3	328.15	Mass density, sound velocity, mixing enthalpy, <sup>1</sup> H NMR, Ab initio calculations and intermolecular interactions in binary mixtures of N-methylimidazole + water, +methanol, +ethanol, +1-propanol, +2-propanol
rhoI	763.30	kg/m3	318.15	Mass density, sound velocity, mixing enthalpy, <sup>1</sup> H NMR, Ab initio calculations and intermolecular interactions in binary mixtures of N-methylimidazole + water, +methanol, +ethanol, +1-propanol, +2-propanol
rhoI	772.26	kg/m3	308.15	Mass density, sound velocity, mixing enthalpy, <sup>1</sup> H NMR, Ab initio calculations and intermolecular interactions in binary mixtures of N-methylimidazole + water, +methanol, +ethanol, +1-propanol, +2-propanol

rhoI	780.86	kg/m3	298.15	Mass density, sound velocity, mixing enthalpy, <sup>1</sup> H NMR, Ab initio calculations and intermolecular interactions in binary mixtures of N-methylimidazole + water, +methanol, +ethanol, +1-propanol, +2-propanol
rhoI	789.18	kg/m3	288.15	Mass density, sound velocity, mixing enthalpy, <sup>1</sup> H NMR, Ab initio calculations and intermolecular interactions in binary mixtures of N-methylimidazole + water, +methanol, +ethanol, +1-propanol, +2-propanol
rhoI	780.69	kg/m3	298.15	Liquid-liquid equilibria and density data for pseudoternary systems of refined soybean oil + (hexanal, or heptanal, or butyric acid, or valeric acid, or caproic acid, or caprylic acid) + dimethyl sulfoxide at 298.15 K
rhoI	781.00	kg/m3	298.15	Density, speed of sound and refractive index of mixtures containing 2-phenoxyethanol with propanol or butanol at various temperatures

rhoI	759.00	kg/m3	323.15	Density, speed of sound and refractive index of mixtures containing 2-phenoxyethanol with propanol or butanol at various temperatures
rhoI	768.00	kg/m3	313.15	Density, speed of sound and refractive index of mixtures containing 2-phenoxyethanol with propanol or butanol at various temperatures
rhoI	777.00	kg/m3	303.15	Density, speed of sound and refractive index of mixtures containing 2-phenoxyethanol with propanol or butanol at various temperatures
rhoI	785.00	kg/m3	293.15	Density, speed of sound and refractive index of mixtures containing 2-phenoxyethanol with propanol or butanol at various temperatures
rhoI	754.10	kg/m3	328.15	Thermophysical properties of binary mixtures of 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate ionic liquid with alcohols at several temperatures
rhoI	763.40	kg/m3	318.15	Thermophysical properties of binary mixtures of 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate ionic liquid with alcohols at several temperatures

rhoI	772.40	kg/m3	308.15	Thermophysical properties of binary mixtures of 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate ionic liquid with alcohols at several temperatures
rhoI	781.00	kg/m3	298.15	Thermophysical properties of binary mixtures of 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate ionic liquid with alcohols at several temperatures
rhoI	789.40	kg/m3	288.15	Thermophysical properties of binary mixtures of 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate ionic liquid with alcohols at several temperatures
rhoI	797.50	kg/m3	278.15	Thermophysical properties of binary mixtures of 1-butyl-1-methylpyrrolidinium trifluoromethanesulfonate ionic liquid with alcohols at several temperatures
rhoI	763.48	kg/m3	318.15	Excess molar volume and excess Gibbs energy of activation for viscous flow for the binary mixtures of N-ethylpyridinium dicyanamide [C2py][DCA] with alcohols
rhoI	768.02	kg/m3	313.15	Excess molar volume and excess Gibbs energy of activation for viscous flow for the binary mixtures of N-ethylpyridinium dicyanamide [C2py][DCA] with alcohols

rhoI	772.46	kg/m3	308.15	Excess molar volume and excess Gibbs energy of activation for viscous flow for the binary mixtures of N-ethylpyridinium dicyanamide [C2py][DCA] with alcohols
rhoI	776.81	kg/m3	303.15	Excess molar volume and excess Gibbs energy of activation for viscous flow for the binary mixtures of N-ethylpyridinium dicyanamide [C2py][DCA] with alcohols
rhoI	781.08	kg/m3	298.15	Excess molar volume and excess Gibbs energy of activation for viscous flow for the binary mixtures of N-ethylpyridinium dicyanamide [C2py][DCA] with alcohols
rhoI	785.29	kg/m3	293.15	Excess molar volume and excess Gibbs energy of activation for viscous flow for the binary mixtures of N-ethylpyridinium dicyanamide [C2py][DCA] with alcohols
rhoI	789.41	kg/m3	288.15	Excess molar volume and excess Gibbs energy of activation for viscous flow for the binary mixtures of N-ethylpyridinium dicyanamide [C2py][DCA] with alcohols



rhoI	753.12	kg/m3	328.15	The study of physico-chemical properties of binary systems consisting of N-Methylcyclohexylamine with 2-alkanols at T = (298.15-328.15) K
rhoI	763.41	kg/m3	318.15	The study of physico-chemical properties of binary systems consisting of N-Methylcyclohexylamine with 2-alkanols at T = (298.15-328.15) K
rhoI	772.41	kg/m3	308.15	The study of physico-chemical properties of binary systems consisting of N-Methylcyclohexylamine with 2-alkanols at T = (298.15-328.15) K
rhoI	781.05	kg/m3	298.15	The study of physico-chemical properties of binary systems consisting of N-Methylcyclohexylamine with 2-alkanols at T = (298.15-328.15) K
rhoI	780.85	kg/m3	298.20	A green process for recovery of 1-propanol/2-propanol from their aqueous solutions: Experimental and MD simulation studies
rhoI	769.70	kg/m3	313.15	Investigation on molecular interactions of antibiotics in alcohols using volumetric and acoustic studies at different temperatures

rhoI	772.02	kg/m <sup>3</sup>	308.15	Investigation on molecular interactions of antibiotics in alcohols using volumetric and acoustic studies at different temperatures
rhoI	777.06	kg/m <sup>3</sup>	303.15	Investigation on molecular interactions of antibiotics in alcohols using volumetric and acoustic studies at different temperatures
rhoI	781.34	kg/m <sup>3</sup>	298.15	Investigation on molecular interactions of antibiotics in alcohols using volumetric and acoustic studies at different temperatures
rhoI	785.81	kg/m <sup>3</sup>	293.15	Investigation on molecular interactions of antibiotics in alcohols using volumetric and acoustic studies at different temperatures
rhoI	781.11	kg/m <sup>3</sup>	298.15	Experimental study on the calorimetric data of 2-butoxyethanol with aliphatic alcohols (C1-C4) and correlation with the Wilson, NRTL and UNIQUAC models at T = 298 K
rhoI	781.20	kg/m <sup>3</sup>	298.15	Measurement and correlation of solubility and solution thermodynamics of 1,3-dimethylurea in different solvents from T = (288.15 to 328.15) K

rhoI	781.10	kg/m3	298.15	Solubility and solution thermodynamics of thymol in six pure organic solvents
rhoI	781.20	kg/m3	298.15	Excess molar enthalpies of R-fenchone + propan-1-ol or +propan-2-ol. Modeling with COSMO-RS and UNIFAC
rhoI	758.80	kg/m3	323.15	Thermodynamic and transport properties of binary mixtures; friction theory coupled with PC-SAFT model
rhoI	763.40	kg/m3	318.15	Thermodynamic and transport properties of binary mixtures; friction theory coupled with PC-SAFT model
rhoI	768.00	kg/m3	313.15	Thermodynamic and transport properties of binary mixtures; friction theory coupled with PC-SAFT model
rhoI	772.40	kg/m3	308.15	Thermodynamic and transport properties of binary mixtures; friction theory coupled with PC-SAFT model
rhoI	776.80	kg/m3	303.15	Thermodynamic and transport properties of binary mixtures; friction theory coupled with PC-SAFT model
rhoI	781.10	kg/m3	298.15	Thermodynamic and transport properties of binary mixtures; friction theory coupled with PC-SAFT model
rhoI	785.40	kg/m3	293.15	Thermodynamic and transport properties of binary mixtures; friction theory coupled with PC-SAFT model

rhoI	780.60	kg/m3	298.15	Solubility and solution thermodynamics of sorbic acid in eight pure organic solvents
rhoI	780.80	kg/m3	298.15	Measurements and modeling of LLE and HE for (methanol + 2,4,4-trimethyl-1-pentene), and LLE for (water + methanol + 2,4,4-trimethyl-1-pentene)
rhoI	780.90	kg/m3	298.15	(Liquid + liquid) equilibria for mixtures of dodecane and ethanol with alkylsulfate-based ionic liquids
rhoI	780.90	kg/m3	298.15	A combined experimental and computational investigation of excess molar enthalpies of (nitrobenzene + alkanol) mixtures
rhoI	768.45	kg/m3	313.15	Molecular interactions in binary mixtures of 1-butoxy-2-propanol with alcohols at different temperatures: A thermophysical and spectroscopic approach
rhoI	773.15	kg/m3	308.15	Molecular interactions in binary mixtures of 1-butoxy-2-propanol with alcohols at different temperatures: A thermophysical and spectroscopic approach

rhoI	777.47	kg/m3	303.15	Molecular interactions in binary mixtures of 1-butoxy-2-propanol with alcohols at different temperatures: A thermophysical and spectroscopic approach	
rhoI	781.59	kg/m3	298.15	Molecular interactions in binary mixtures of 1-butoxy-2-propanol with alcohols at different temperatures: A thermophysical and spectroscopic approach	
rhoI	785.74	kg/m3	293.15	Molecular interactions in binary mixtures of 1-butoxy-2-propanol with alcohols at different temperatures: A thermophysical and spectroscopic approach	
rhoI	767.76	kg/m3	313.15	Densities and viscosities of the mixtures (formamide + 2-alkanol): Experimental and theoretical approaches	
rhoI	772.39	kg/m3	308.15	Densities and viscosities of the mixtures (formamide + 2-alkanol): Experimental and theoretical approaches	
rhoI	776.79	kg/m3	303.15	Densities and viscosities of the mixtures (formamide + 2-alkanol): Experimental and theoretical approaches	

rhoI	780.95	kg/m3	298.15	Densities and viscosities of the mixtures (formamide + 2-alkanol): Experimental and theoretical approaches
rhoI	758.63	kg/m3	323.15	Osmotic coefficients and apparent molar volumes of 1-hexyl-3-methylimidazolium trifluoromethanesulfonate ionic liquid in alcohols
rhoI	758.70	kg/m3	323.15	Osmotic and apparent molar properties of binary mixtures alcohol + 1-butyl-3-methylimidazolium trifluoromethanesulfonate ionic liquid
rhoI	772.31	kg/m3	308.15	Osmotic and apparent molar properties of binary mixtures alcohol + 1-butyl-3-methylimidazolium trifluoromethanesulfonate ionic liquid
rhoI	785.10	kg/m3	293.15	Osmotic and apparent molar properties of binary mixtures alcohol + 1-butyl-3-methylimidazolium trifluoromethanesulfonate ionic liquid
rhoI	781.40	kg/m3	298.15	Phase diagrams of (hexane + methanol + 2,2,2-trifluoroethanol) at three temperatures: Measurement and correlation
rhoI	758.71	kg/m3	323.15	Densities and volumetric properties of (N-(2-hydroxyethyl)morpholine + ethanol, + 1-propanol, + 2-propanol, + 1-butanol, and + 2-butanol) at (293.15, 298.15, 303.15, 313.15, and 323.15) K

rhoI	767.83	kg/m3	313.15	Densities and volumetric properties of (N-(2-hydroxyethyl)morpholine + ethanol, + 1-propanol, + 2-propanol, + 1-butanol, and + 2-butanol) at (293.15, 298.15, 303.15, 313.15, and 323.15) K
rhoI	776.66	kg/m3	303.15	Densities and volumetric properties of (N-(2-hydroxyethyl)morpholine + ethanol, + 1-propanol, + 2-propanol, + 1-butanol, and + 2-butanol) at (293.15, 298.15, 303.15, 313.15, and 323.15) K
rhoI	781.31	kg/m3	298.15	Densities and volumetric properties of (N-(2-hydroxyethyl)morpholine + ethanol, + 1-propanol, + 2-propanol, + 1-butanol, and + 2-butanol) at (293.15, 298.15, 303.15, 313.15, and 323.15) K
rhoI	785.18	kg/m3	293.15	Densities and volumetric properties of (N-(2-hydroxyethyl)morpholine + ethanol, + 1-propanol, + 2-propanol, + 1-butanol, and + 2-butanol) at (293.15, 298.15, 303.15, 313.15, and 323.15) K
rhoI	780.80	kg/m3	298.15	Density and speed of sound of lithium bromide with organic solvents: Measurement and correlation

rhoI	738.91	kg/m3	343.15	Densities and derived thermodynamic properties of (2-methoxyethanol + 1-propanol, or 2-propanol, or 1,2-propandiol) at temperatures from T = (293.15 to 343.15) K
rhoI	749.06	kg/m3	333.15	Densities and derived thermodynamic properties of (2-methoxyethanol + 1-propanol, or 2-propanol, or 1,2-propandiol) at temperatures from T = (293.15 to 343.15) K
rhoI	758.68	kg/m3	323.15	Densities and derived thermodynamic properties of (2-methoxyethanol + 1-propanol, or 2-propanol, or 1,2-propandiol) at temperatures from T = (293.15 to 343.15) K
rhoI	767.85	kg/m3	313.15	Densities and derived thermodynamic properties of (2-methoxyethanol + 1-propanol, or 2-propanol, or 1,2-propandiol) at temperatures from T = (293.15 to 343.15) K
rhoI	776.63	kg/m3	303.15	Densities and derived thermodynamic properties of (2-methoxyethanol + 1-propanol, or 2-propanol, or 1,2-propandiol) at temperatures from T = (293.15 to 343.15) K



rhoI	785.10	kg/m3	293.15	Densities and derived thermodynamic properties of (2-methoxyethanol + 1-propanol, or 2-propanol, or 1,2-propandiol) at temperatures from T = (293.15 to 343.15) K
rhoI	781.30	kg/m3	298.15	Bubble point temperatures of the binary mixtures of nitrobenzene with C1 C4 aliphatic alcohols at 94.95 kPa
rhoI	780.79	kg/m3	298.15	Solid-liquid equilibria for selected binary systems containing diphenyl carbonate
rhoI	786.00	kg/m3	293.15	Effect of imidazolium-based ionic liquid on vapor-liquid equilibria of 2-propanol + acetonitrile binary system at 101.3 kPa
rhoI	782.45	kg/m3	298.15	Experimental vapour - liquid equilibrium data of the quaternary system Methanol (1) + Isopropyl Alcohol (2) + Water (3) + Glycerol (4) along with Isopropyl Alcohol (2) + Glycerol (4) and Isopropyl Alcohol (2) + Water (3) binary data at atmospheric and sub-atmospheric pressures.

rhoI	786.91	kg/m3	293.15	Experimental vapour - liquid equilibrium data of the quaternary system Methanol (1) + Isopropyl Alcohol (2) + Water (3) + Glycerol (4) along with Isopropyl Alcohol (2) + Glycerol (4) and Isopropyl Alcohol (2) + Water (3) binary data at atmospheric and sub-atmospheric pressures.
rhoI	780.80	kg/m3	298.15	Determination and prediction of solubilities of active pharmaceutical ingredients in selected organic solvents
rhoI	782.45	kg/m3	298.15	Isobaric ternary vapour-liquid equilibrium of methanol(1) + diisopropyl ether(2) + isopropyl alcohol(3) along with methanol + isopropyl alcohol binary data at atmospheric and sub-atmospheric pressures
rhoI	754.84	kg/m3	328.15	Densities, surface tensions, and isobaric vapor-liquid equilibria for the mixtures of 2-propanol, water, and 1,2-propanediol
rhoI	763.61	kg/m3	318.15	Densities, surface tensions, and isobaric vapor-liquid equilibria for the mixtures of 2-propanol, water, and 1,2-propanediol

rho1	772.32	kg/m3	308.15	Densities, surface tensions, and isobaric vapor-liquid equilibria for the mixtures of 2-propanol, water, and 1,2-propanediol
rho1	781.18	kg/m3	298.15	Densities, surface tensions, and isobaric vapor-liquid equilibria for the mixtures of 2-propanol, water, and 1,2-propanediol
rho1	782.45	kg/m3	298.15	Experimental isobaric vapor-liquid equilibrium at atmospheric and sub-atmospheric pressures, excess molar volumes and deviations in molar refractivity from 293.15 K to 318.15 K of diisopropyl ether with methanol and isopropyl alcohol.
rho1	758.84	kg/m3	323.15	Measurement and modeling of volumetric properties and speeds of sound of several mixtures of alcohol liquids containing 1-propanol and 2-propanol at T=(298.15 - 323.15) K and ambient pressure
rho1	763.49	kg/m3	318.15	Measurement and modeling of volumetric properties and speeds of sound of several mixtures of alcohol liquids containing 1-propanol and 2-propanol at T=(298.15 - 323.15) K and ambient pressure

rhoI	768.02	kg/m3	313.15	Measurement and modeling of volumetric properties and speeds of sound of several mixtures of alcohol liquids containing 1-propanol and 2-propanol at T= (298.15 - 323.15) K and ambient pressure
rhoI	772.45	kg/m3	308.15	Measurement and modeling of volumetric properties and speeds of sound of several mixtures of alcohol liquids containing 1-propanol and 2-propanol at T= (298.15 - 323.15) K and ambient pressure
rhoI	776.80	kg/m3	303.15	Measurement and modeling of volumetric properties and speeds of sound of several mixtures of alcohol liquids containing 1-propanol and 2-propanol at T= (298.15 - 323.15) K and ambient pressure
rhoI	781.08	kg/m3	298.15	Measurement and modeling of volumetric properties and speeds of sound of several mixtures of alcohol liquids containing 1-propanol and 2-propanol at T= (298.15 - 323.15) K and ambient pressure

rhoI	781.18	kg/m3	298.15	Isobaric vapor-liquid equilibria for the binary and ternary mixtures of 2-propanol, water, and 1,3-propanediol at p = 101.3 kPa: Effect of the 1,3-propanediol addition
rhoI	782.70	kg/m3	298.15	Solubility of androstenedione in lower alcohols
rhoI	782.70	kg/m3	298.15	Liquid liquid equilibria of 4-methyl-2-pentanone + 1-propanol or 2-propanol + water ternary systems: Measurements and correlation at different temperatures
rhoI	781.59	kg/m3	298.15	Thermodynamic and spectral investigations of binary liquid mixtures of 2-butoxy ethanol with alcohols at temperature range of 293.15-313.15 K
rhoI	785.90	kg/m3	293.15	Measurement and correlation of liquid liquid equilibrium data for 2-methyl-1-propanol + 2-propanol + water at several temperatures
rhoI	781.21	kg/m3	298.15	Liquid liquid equilibria for the binary system of di-isopropyl ether (DIPE) +water in between 288.15 and 323.15K and the ternary systems of DIPE +water + C1 C4 alcohols at 298.15K

rhoI	749.01	kg/m3	333.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	753.88	kg/m3	328.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	758.64	kg/m3	323.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	763.28	kg/m3	318.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	767.81	kg/m3	313.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine

rhoI	772.25	kg/m3	308.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	776.60	kg/m3	303.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	780.87	kg/m3	298.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	785.08	kg/m3	293.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	789.22	kg/m3	288.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine

rhoI	793.31	kg/m3	283.15	Volumetric properties of the boldine + alcohol mixtures at atmospheric pressure from 283.15 to 333.15K A new method for the determination of the density of pure boldine
rhoI	777.30	kg/m3	303.15	Viscous synergy and antagonism and isentropic compressibility of ternary mixtures containing 1,3-dioxolane, water and monoalkanols at 303.15K
rhoI	780.91	kg/m3	298.15	Isothermal vapour liquid equilibria in the binary and ternary systems composed of 2-propanol, diisopropyl ether and 4-methyl-2-pentanone
rhoI	741.00	kg/m3	343.30	Effect of Al2O3 Nanoparticles Additives on the Density, Saturated Vapor Pressure, Surface Tension and Viscosity of Isopropyl Alcohol
rhoI	760.10	kg/m3	323.40	Effect of Al2O3 Nanoparticles Additives on the Density, Saturated Vapor Pressure, Surface Tension and Viscosity of Isopropyl Alcohol
rhoI	777.50	kg/m3	303.60	Effect of Al2O3 Nanoparticles Additives on the Density, Saturated Vapor Pressure, Surface Tension and Viscosity of Isopropyl Alcohol



rhoI	784.30	kg/m3	295.30	Effect of Al <sub>2</sub> O <sub>3</sub> Nanoparticles Additives on the Density, Saturated Vapor Pressure, Surface Tension and Viscosity of Isopropyl Alcohol
rhoI	795.30	kg/m3	283.10	Effect of Al <sub>2</sub> O <sub>3</sub> Nanoparticles Additives on the Density, Saturated Vapor Pressure, Surface Tension and Viscosity of Isopropyl Alcohol
rhoI	810.90	kg/m3	263.10	Effect of Al <sub>2</sub> O <sub>3</sub> Nanoparticles Additives on the Density, Saturated Vapor Pressure, Surface Tension and Viscosity of Isopropyl Alcohol
rhoI	763.90	kg/m3	318.15	Densities and Volumetric Properties of Binary Mixtures of Aniline with 1-Propanol, 2-Propanol, 2-Methyl-1-Propanol, and 2-Methyl-2-Propanol at Temperatures from 293.15 to 318.15 K
rhoI	768.11	kg/m3	313.15	Densities and Volumetric Properties of Binary Mixtures of Aniline with 1-Propanol, 2-Propanol, 2-Methyl-1-Propanol, and 2-Methyl-2-Propanol at Temperatures from 293.15 to 318.15 K

rhoI	772.32	kg/m3	308.15	Densities and Volumetric Properties of Binary Mixtures of Aniline with 1-Propanol, 2-Propanol, 2-Methyl-1-Propanol, and 2-Methyl-2-Propanol at Temperatures from 293.15 to 318.15 K
rhoI	776.54	kg/m3	303.15	Densities and Volumetric Properties of Binary Mixtures of Aniline with 1-Propanol, 2-Propanol, 2-Methyl-1-Propanol, and 2-Methyl-2-Propanol at Temperatures from 293.15 to 318.15 K
rhoI	780.75	kg/m3	298.15	Densities and Volumetric Properties of Binary Mixtures of Aniline with 1-Propanol, 2-Propanol, 2-Methyl-1-Propanol, and 2-Methyl-2-Propanol at Temperatures from 293.15 to 318.15 K
rhoI	784.96	kg/m3	293.15	Densities and Volumetric Properties of Binary Mixtures of Aniline with 1-Propanol, 2-Propanol, 2-Methyl-1-Propanol, and 2-Methyl-2-Propanol at Temperatures from 293.15 to 318.15 K
rhoI	781.91	kg/m3	298.15	Speeds of Sound and Isentropic Compressibilities in Binary Mixtures of 2-Propanol with Several 1-Alkanols at 298.15K
rhoI	786.00	kg/m3	293.00	KDB

rhoI	763.30	kg/m3	318.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures
rhoI	767.90	kg/m3	313.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures
rhoI	772.30	kg/m3	308.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures
rhoI	776.60	kg/m3	303.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures
rhoI	780.60	kg/m3	298.15	Densities and Excess Molar Volumes for Binary Glycerol + 1-Propanol, + 2-Propanol, + 1,2-Propanediol, and + 1,3-Propanediol Mixtures at Different Temperatures

rhoI	780.90	kg/m3	298.15	Dynamic Viscosities of Diethyl Carbonate with Linear and Secondary Alcohols at Several Temperatures
rhoI	759.00	kg/m3	323.15	Liquid Densities and Speed of Sound for Ionic Liquid (2-HEAA and 2-HDEAA) + Alcohol (1-Propanol and 2-Propanol) Mixtures at T = (293.15-323.15 K) and Atmospheric Pressure
rhoI	768.20	kg/m3	313.15	Liquid Densities and Speed of Sound for Ionic Liquid (2-HEAA and 2-HDEAA) + Alcohol (1-Propanol and 2-Propanol) Mixtures at T = (293.15-323.15 K) and Atmospheric Pressure
rhoI	777.00	kg/m3	303.15	Liquid Densities and Speed of Sound for Ionic Liquid (2-HEAA and 2-HDEAA) + Alcohol (1-Propanol and 2-Propanol) Mixtures at T = (293.15-323.15 K) and Atmospheric Pressure
rhoI	791.50	kg/m3	293.15	Liquid Densities and Speed of Sound for Ionic Liquid (2-HEAA and 2-HDEAA) + Alcohol (1-Propanol and 2-Propanol) Mixtures at T = (293.15-323.15 K) and Atmospheric Pressure

rhoI	758.50	kg/m3	323.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhoI	763.10	kg/m3	318.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhoI	767.60	kg/m3	313.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhoI	772.10	kg/m3	308.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhoI	776.40	kg/m3	303.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model

rhoI	780.70	kg/m3	298.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhoI	784.90	kg/m3	293.15	Density and Viscosity of 2-Butanol + (1-Propanol, 2-Propanol, or 3-Amino-1-propanol) Mixtures at Temperatures of (293.15 to 323.15) K: Application of the ERAS Model
rhoI	781.40	kg/m3	298.15	Determination and Correlation of Liquid-Liquid Equilibria Data for Ternary System Isopropyl Acetate + Isopropanol + Water at Different Temperatures
rhoI	768.00	kg/m3	313.15	Total Pressure Phase Equilibrium Measurements for the Binary Systems of n-Pentane + Cyclohexane and 1-Hexene + 2-Propanol
rhoI	743.66	kg/m3	338.15	Density, Speed of Sound, and Refractive Index Measurements for Binary Mixtures of Pentan-2-one with Propan-2-ol and Butan-2-ol
rhoI	754.19	kg/m3	328.15	Density, Speed of Sound, and Refractive Index Measurements for Binary Mixtures of Pentan-2-one with Propan-2-ol and Butan-2-ol

rhoI	763.51	kg/m3	318.15	Density, Speed of Sound, and Refractive Index Measurements for Binary Mixtures of Pentan-2-one with Propan-2-ol and Butan-2-ol
rhoI	772.51	kg/m3	308.15	Density, Speed of Sound, and Refractive Index Measurements for Binary Mixtures of Pentan-2-one with Propan-2-ol and Butan-2-ol
rhoI	781.10	kg/m3	298.15	Density, Speed of Sound, and Refractive Index Measurements for Binary Mixtures of Pentan-2-one with Propan-2-ol and Butan-2-ol
rhoI	763.88	kg/m3	318.15	Densities and Excess Molar Volumes for the Binary and Ternary Systems of (1,4-Dioxane, 1-Propanol or 2-Propanol, and 1,2-Dichloroethane) at T = (288.15 to 318.15) K. Experimental Measurements and Prigogine-Flory-Patterson Modeling
rhoI	772.48	kg/m3	308.15	Densities and Excess Molar Volumes for the Binary and Ternary Systems of (1,4-Dioxane, 1-Propanol or 2-Propanol, and 1,2-Dichloroethane) at T = (288.15 to 318.15) K. Experimental Measurements and Prigogine-Flory-Patterson Modeling

rhoI	781.08	kg/m3	298.15	Densities and Excess Molar Volumes for the Binary and Ternary Systems of (1,4-Dioxane, 1-Propanol or 2-Propanol, and 1,2-Dichloroethane) at T = (288.15 to 318.15) K. Experimental Measurements and Prigogine-Flory-Patterson Modeling
rhoI	789.68	kg/m3	288.15	Densities and Excess Molar Volumes for the Binary and Ternary Systems of (1,4-Dioxane, 1-Propanol or 2-Propanol, and 1,2-Dichloroethane) at T = (288.15 to 318.15) K. Experimental Measurements and Prigogine-Flory-Patterson Modeling
rhoI	781.10	kg/m3	298.15	Isobaric Vapor-Liquid Phase Equilibrium Measurements, Correlation, and Prediction for Separation of the Mixtures of Cyclohexanone and Alcohols
rhoI	768.00	kg/m3	313.15	Experimental Phase Equilibrium for the Binary System of n-Pentane +2-Propanol Using a New Equilibrium Cell and the Static Total Pressure Method
rhoI	782.00	kg/m3	298.15	Isobaric Vapor-Liquid Equilibrium for the Binary Systems of Sec-butyl Acetate and Ethanol, 1-Propanol, or 2-Propanol at 101.3 kPa



rhoI	758.80	kg/m3	323.15	Influence of Temperature and Carbon Chain on Thermophysical Properties of Benzaldehyde/Alkan-2-ol Binary Mixtures
rhoI	763.40	kg/m3	318.15	Influence of Temperature and Carbon Chain on Thermophysical Properties of Benzaldehyde/Alkan-2-ol Binary Mixtures
rhoI	768.00	kg/m3	313.15	Influence of Temperature and Carbon Chain on Thermophysical Properties of Benzaldehyde/Alkan-2-ol Binary Mixtures
rhoI	772.40	kg/m3	308.15	Influence of Temperature and Carbon Chain on Thermophysical Properties of Benzaldehyde/Alkan-2-ol Binary Mixtures
rhoI	776.80	kg/m3	303.15	Influence of Temperature and Carbon Chain on Thermophysical Properties of Benzaldehyde/Alkan-2-ol Binary Mixtures
rhoI	781.10	kg/m3	298.15	Influence of Temperature and Carbon Chain on Thermophysical Properties of Benzaldehyde/Alkan-2-ol Binary Mixtures
rhoI	785.40	kg/m3	293.15	Influence of Temperature and Carbon Chain on Thermophysical Properties of Benzaldehyde/Alkan-2-ol Binary Mixtures
rhoI	758.80	kg/m3	323.15	Studies on Thermodynamic and Transport Properties of Binary Mixtures Containing Alcohols and Aniline

rhoI	763.40	kg/m3	318.15	Studies on Thermodynamic and Transport Properties of Binary Mixtures Containing Alcohols and Aniline	
rhoI	768.00	kg/m3	313.15	Studies on Thermodynamic and Transport Properties of Binary Mixtures Containing Alcohols and Aniline	
rhoI	772.40	kg/m3	308.15	Studies on Thermodynamic and Transport Properties of Binary Mixtures Containing Alcohols and Aniline	
rhoI	776.80	kg/m3	303.15	Studies on Thermodynamic and Transport Properties of Binary Mixtures Containing Alcohols and Aniline	
rhoI	781.10	kg/m3	298.15	Studies on Thermodynamic and Transport Properties of Binary Mixtures Containing Alcohols and Aniline	
rhoI	789.34	kg/m3	288.15	Volumetric properties of binary liquid mixtures of alcohols with 1,2-dichloroethane at different temperatures and atmospheric pressure	

rho	781.18	kg/m <sup>3</sup>	298.15	Liquid Liquid Equilibria, Equilibrium Phase Densities, and Refractive Indices for the Quaternary Mixtures Containing 2-Propanol or 2-Methyl-2-Propanol of Fuel Oxygenate at T = 298.15 and 318.15 K
rho	744.02	kg/m <sup>3</sup>	338.15	Thermophysical Characterization of the Mixtures of the Ionic Liquid 1-Ethyl-3-Methylimidazolium Acetate with 1-Propanol or 2-Propanol
rho	753.89	kg/m <sup>3</sup>	328.15	Thermophysical Characterization of the Mixtures of the Ionic Liquid 1-Ethyl-3-Methylimidazolium Acetate with 1-Propanol or 2-Propanol
rho	763.27	kg/m <sup>3</sup>	318.15	Thermophysical Characterization of the Mixtures of the Ionic Liquid 1-Ethyl-3-Methylimidazolium Acetate with 1-Propanol or 2-Propanol
rho	772.23	kg/m <sup>3</sup>	308.15	Thermophysical Characterization of the Mixtures of the Ionic Liquid 1-Ethyl-3-Methylimidazolium Acetate with 1-Propanol or 2-Propanol
rho	780.84	kg/m <sup>3</sup>	298.15	Thermophysical Characterization of the Mixtures of the Ionic Liquid 1-Ethyl-3-Methylimidazolium Acetate with 1-Propanol or 2-Propanol
rho	789.18	kg/m <sup>3</sup>	288.15	Thermophysical Characterization of the Mixtures of the Ionic Liquid 1-Ethyl-3-Methylimidazolium Acetate with 1-Propanol or 2-Propanol

rhoI	798.00	kg/m3	298.15	Liquid Liquid Equilibrium data for the ternary systems of Water, Isopropyl alcohol, and selected entrainers
rhoI	767.99	kg/m3	313.15	Density, Speed of Sound, Viscosity, Excess Properties, and Prigogine Flory Patterson (PFP) Theory of Binary Mixtures of Amine and Alcohols
rhoI	772.42	kg/m3	308.15	Density, Speed of Sound, Viscosity, Excess Properties, and Prigogine Flory Patterson (PFP) Theory of Binary Mixtures of Amine and Alcohols
rhoI	776.78	kg/m3	303.15	Density, Speed of Sound, Viscosity, Excess Properties, and Prigogine Flory Patterson (PFP) Theory of Binary Mixtures of Amine and Alcohols
rhoI	781.05	kg/m3	298.15	Density, Speed of Sound, Viscosity, Excess Properties, and Prigogine Flory Patterson (PFP) Theory of Binary Mixtures of Amine and Alcohols
rhoI	785.25	kg/m3	293.15	Density, Speed of Sound, Viscosity, Excess Properties, and Prigogine Flory Patterson (PFP) Theory of Binary Mixtures of Amine and Alcohols

rhoI	781.21	kg/m3	298.15	Modified Method for Measuring the Solubility of Pharmaceutical Compounds in Organic Solvents by Visual Camera
rhoI	763.29	kg/m3	318.15	The excess molar volume and the molar surface Gibbs energy of the binary of the ether-functionalized ionic liquids [C22O1IM][TfO] with ethanol and isomeric propanols at T = (288.15-318.15) K
rhoI	767.83	kg/m3	313.15	The excess molar volume and the molar surface Gibbs energy of the binary of the ether-functionalized ionic liquids [C22O1IM][TfO] with ethanol and isomeric propanols at T = (288.15-318.15) K
rhoI	772.27	kg/m3	308.15	The excess molar volume and the molar surface Gibbs energy of the binary of the ether-functionalized ionic liquids [C22O1IM][TfO] with ethanol and isomeric propanols at T = (288.15-318.15) K
rhoI	776.62	kg/m3	303.15	The excess molar volume and the molar surface Gibbs energy of the binary of the ether-functionalized ionic liquids [C22O1IM][TfO] with ethanol and isomeric propanols at T = (288.15-318.15) K

rhoI	780.89	kg/m3	298.15	The excess molar volume and the molar surface Gibbs energy of the binary of the ether-functionalized ionic liquids [C22O1IM][TfO] with ethanol and isomeric propanols at T = (288.15-318.15) K
rhoI	785.09	kg/m3	293.15	The excess molar volume and the molar surface Gibbs energy of the binary of the ether-functionalized ionic liquids [C22O1IM][TfO] with ethanol and isomeric propanols at T = (288.15-318.15) K
rhoI	789.22	kg/m3	288.15	The excess molar volume and the molar surface Gibbs energy of the binary of the ether-functionalized ionic liquids [C22O1IM][TfO] with ethanol and isomeric propanols at T = (288.15-318.15) K
rhoI	758.80	kg/m3	323.15	Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model
rhoI	763.40	kg/m3	318.15	Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model
rhoI	768.00	kg/m3	313.15	Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model
rhoI	772.40	kg/m3	308.15	Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model

rho1	785.20	kg/m3	293.15	Volumetric properties of binary liquid mixtures of alcohols with 1,2-dichloroethane at different temperatures and atmospheric pressure
rho1	781.10	kg/m3	298.15	Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model
rho1	785.40	kg/m3	293.15	Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model
rho1	767.93	kg/m3	313.15	Volumetric properties of binary liquid mixtures of alcohols with 1,2-dichloroethane at different temperatures and atmospheric pressure
rho1	772.37	kg/m3	308.15	Volumetric properties of binary liquid mixtures of alcohols with 1,2-dichloroethane at different temperatures and atmospheric pressure
rho1	776.72	kg/m3	303.15	Volumetric properties of binary liquid mixtures of alcohols with 1,2-dichloroethane at different temperatures and atmospheric pressure
rho1	776.80	kg/m3	303.15	Evaluation of thermodynamic properties of fluid mixtures by PC-SAFT model
rho1	785.40	kg/m3	293.15	Studies on Thermodynamic and Transport Properties of Binary Mixtures Containing Alcohols and Aniline

sfust	29.21	J/mol×K	185.20	NIST Webbook
sfust	28.72	J/mol×K	184.60	NIST Webbook
sfust	29.09	J/mol×K	184.67	NIST Webbook
sfust	28.70	J/mol×K	184.60	NIST Webbook
speedsl	1138.16	m/s	298.15	Ultrasonic and Volumetric Properties of 1-Ethyl-3-methylimidazolium Trifluoromethanesulfonate Ionic Liquid with 2-Propanol or Tetrahydrofuran at Several Temperatures
speedsl	1086.62	m/s	313.15	Thermophysical study of the binary mixtures of N,N-dimethylacetamide with 2-propanol and 2-butanol
speedsl	1139.17	m/s	298.15	Thermophysical study of the binary mixtures of N,N-dimethylacetamide with 2-propanol and 2-butanol
speedsl	1173.07	m/s	288.15	Ultrasonic and Volumetric Properties of 1-Ethyl-3-methylimidazolium Trifluoromethanesulfonate Ionic Liquid with 2-Propanol or Tetrahydrofuran at Several Temperatures
speedsl	1191.88	m/s	283.15	Thermophysical study of the binary mixtures of N,N-dimethylacetamide with 2-propanol and 2-butanol
speedsl	1103.25	m/s	308.15	Ultrasonic and Volumetric Properties of 1-Ethyl-3-methylimidazolium Trifluoromethanesulfonate Ionic Liquid with 2-Propanol or Tetrahydrofuran at Several Temperatures



speedsl	1068.09	m/s	318.15	Ultrasonic and Volumetric Properties of 1-Ethyl-3-methylimidazolium Trifluoromethanesulfonate Ionic Liquid with 2-Propanol or Tetrahydrofuran at Several Temperatures
speedsl	1032.57	m/s	328.15	Ultrasonic and Volumetric Properties of 1-Ethyl-3-methylimidazolium Trifluoromethanesulfonate Ionic Liquid with 2-Propanol or Tetrahydrofuran at Several Temperatures
speedsl	1157.30	m/s	293.15	Acoustic, volumetric and osmotic properties of binary mixtures containing the ionic liquid 1-butyl-3-methylimidazolim dicyanamide mixed with primary and secondary alcohols
speedsl	1051.60	m/s	323.15	Acoustic, volumetric and osmotic properties of binary mixtures containing the ionic liquid 1-butyl-3-methylimidazolim dicyanamide mixed with primary and secondary alcohols
speedsl	1104.80	m/s	308.15	Acoustic, volumetric and osmotic properties of binary mixtures containing the ionic liquid 1-butyl-3-methylimidazolim dicyanamide mixed with primary and secondary alcohols

speedsl	1208.50	m/s	278.15	Ultrasonic and Volumetric Properties of 1-Ethyl-3-methylimidazolium Trifluoromethanesulfonate Ionic Liquid with 2-Propanol or Tetrahydrofuran at Several Temperatures
srf	0.02	N/m	303.15	The molar surface Gibbs energy and its application to the binary mixtures of N-butylpyridinium dicyanamide [C4py][DCA] with alcohols
srf	0.02	N/m	333.20	Surface tension and interfacial compositions of binary glycerol/alcohol mixtures
srf	0.02	N/m	323.20	Surface tension and interfacial compositions of binary glycerol/alcohol mixtures
srf	0.02	N/m	313.20	Surface tension and interfacial compositions of binary glycerol/alcohol mixtures
srf	0.02	N/m	303.20	Surface tension and interfacial compositions of binary glycerol/alcohol mixtures
srf	0.02	N/m	293.20	Surface tension and interfacial compositions of binary glycerol/alcohol mixtures
srf	0.02	N/m	318.15	The molar surface Gibbs energy and its application to the binary mixtures of N-butylpyridinium dicyanamide [C4py][DCA] with alcohols

srf	0.02	N/m	313.15	The molar surface Gibbs energy and its application to the binary mixtures of N-butylpyridinium dicyanamide [C4py][DCA] with alcohols
srf	0.02	N/m	308.15	The molar surface Gibbs energy and its application to the binary mixtures of N-butylpyridinium dicyanamide [C4py][DCA] with alcohols
srf	0.02	N/m	293.15	Surface Tension of Dilute Solutions of Linear Alcohols in Benzyl Alcohol
srf	0.02	N/m	298.15	The molar surface Gibbs energy and its application to the binary mixtures of N-butylpyridinium dicyanamide [C4py][DCA] with alcohols
srf	0.02	N/m	293.15	The molar surface Gibbs energy and its application to the binary mixtures of N-butylpyridinium dicyanamide [C4py][DCA] with alcohols
srf	0.02	N/m	288.15	The molar surface Gibbs energy and its application to the binary mixtures of N-butylpyridinium dicyanamide [C4py][DCA] with alcohols

srf	0.02	N/m	328.15	Effect of temperature and composition on the surface tension and surface properties of binary mixtures containing DMSO and short chain alcohols
srf	0.02	N/m	318.15	Effect of temperature and composition on the surface tension and surface properties of binary mixtures containing DMSO and short chain alcohols
srf	0.02	N/m	308.15	Effect of temperature and composition on the surface tension and surface properties of binary mixtures containing DMSO and short chain alcohols
srf	0.02	N/m	298.15	Effect of temperature and composition on the surface tension and surface properties of binary mixtures containing DMSO and short chain alcohols
srf	0.02	N/m	293.20	KDB
srf	0.02	N/m	298.15	Surface Tension of Dilute Solutions of Linear Alcohols in Benzyl Alcohol
srf	0.02	N/m	303.15	Surface Tension of Dilute Solutions of Linear Alcohols in Benzyl Alcohol
srf	0.02	N/m	308.15	Surface Tension of Dilute Solutions of Linear Alcohols in Benzyl Alcohol

srf	0.02	N/m	313.15	Surface Tension of Dilute Solutions of Linear Alcohols in Benzyl Alcohol
srf	0.02	N/m	318.15	Surface Tension of Dilute Solutions of Linear Alcohols in Benzyl Alcohol
srf	0.02	N/m	323.15	Surface Tension of Dilute Solutions of Linear Alcohols in Benzyl Alcohol
srf	0.02	N/m	298.15	Experimental Data and Correlation of Surface Tensions of the Binary and Ternary Systems of Water + Acetonitrile + 2-Propanol at 298.15 K and Atmospheric Pressure
srf	0.02	N/m	298.15	Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary Mixtures of 2-Propanol + Benzyl Alcohol, + 2-Phenylethanol and Benzyl Alcohol + 2-Phenylethanol at T ) (298.15, 308.15, and 318.15) K
srf	0.02	N/m	308.15	Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary Mixtures of 2-Propanol + Benzyl Alcohol, + 2-Phenylethanol and Benzyl Alcohol + 2-Phenylethanol at T ) (298.15, 308.15, and 318.15) K

srf	0.02	N/m	318.15	Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary Mixtures of 2-Propanol + Benzyl Alcohol, + 2-Phenylethanol and Benzyl Alcohol + 2-Phenylethanol at T ) (298.15, 308.15, and 318.15) K
srf	0.02	N/m	288.15	Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary and Ternary Mixtures of Tetrahydrofuran, 2-Propanol, and 2,2,4-Trimethylpentane
srf	0.02	N/m	298.15	Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary and Ternary Mixtures of Tetrahydrofuran, 2-Propanol, and 2,2,4-Trimethylpentane
srf	0.02	N/m	308.15	Densities, Viscosities, Refractive Indexes, and Surface Tensions for Binary and Ternary Mixtures of Tetrahydrofuran, 2-Propanol, and 2,2,4-Trimethylpentane
srf	0.02	N/m	288.15	Densities, Viscosities, Refractive Indices, and Surface Tensions for the Mixtures of 1,3-Dioxolane + 2-Propanol or + 2,2,4-Trimethylpentane at (288.15, 298.15, and 308.15) K and 1,3-Dioxolane + 2-Propanol + 2,2,4-Trimethylpentane at 298.15 K

srf	0.02	N/m	298.15	Densities, Viscosities, Refractive Indices, and Surface Tensions for the Mixtures of 1,3-Dioxolane + 2-Propanol or + 2,2,4-Trimethylpentane at (288.15, 298.15, and 308.15) K and 1,3-Dioxolane + 2-Propanol + 2,2,4-Trimethylpentane at 298.15 K
srf	0.02	N/m	308.15	Densities, Viscosities, Refractive Indices, and Surface Tensions for the Mixtures of 1,3-Dioxolane + 2-Propanol or + 2,2,4-Trimethylpentane at (288.15, 298.15, and 308.15) K and 1,3-Dioxolane + 2-Propanol + 2,2,4-Trimethylpentane at 298.15 K

## Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbp	355.01	K	100.00	Isobaric Vapor-Liquid Equilibria for Water + 2-Propanol + 1-Butyl-3-methylimidazolium Tetrafluoroborate

## Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
Coeff. A	1.60031e+01

Coeff. B	-3.41274e+03
Coeff. C	-5.57370e+01
Temperature range (K), min.	272.89
Temperature range (K), max.	508.31

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/T + C \cdot \ln(T) + D \cdot T^2$
Coeff. A	7.13411e+01
Coeff. B	-7.69090e+03
Coeff. C	-7.69405e+00
Coeff. D	7.65635e-07
Temperature range (K), min.	185.28
Temperature range (K), max.	508.31

## Datasets

### Speed of sound, m/s

Temperature, K - Liquid	Pressure, kPa - Liquid	Speed of sound, m/s - Liquid
253.15	99.00	1300.967
253.15	5138.00	1328.819
253.15	10106.00	1354.875
253.15	15136.00	1380.021
253.15	20143.00	1404.015
253.15	25229.00	1427.462
253.15	30036.00	1448.868
273.15	100.00	1227.88
273.15	5275.00	1258.803
273.15	10173.00	1286.447
273.15	15164.00	1313.265
273.15	20289.00	1339.577
273.15	25102.00	1363.26
273.15	30264.00	1387.65
293.15	100.00	1157.361
293.15	5085.00	1189.739
293.15	10183.00	1220.822
293.15	15273.00	1250.197



293.15	20239.00	1277.428
293.15	25220.00	1303.56
293.15	30278.00	1328.856
313.15	100.00	1087.156
313.15	5177.00	1123.06
313.15	10104.00	1155.744
313.15	15187.00	1187.465
313.15	20126.00	1216.587
313.15	25138.00	1244.664
313.15	30110.00	1271.13
333.15	100.00	1015.957
333.15	5048.00	1054.493
333.15	10038.00	1090.587
333.15	15065.00	1124.563
333.15	20102.00	1156.534
333.15	25093.00	1186.433
333.15	30014.00	1214.42
353.15	100.00	940.503
353.15	5080.00	983.885
353.15	10091.00	1023.857
353.15	15114.00	1060.82
353.15	20132.00	1095.253
353.15	25164.00	1127.605
353.15	30380.00	1159.239

Reference

<https://www.doi.org/10.1016/j.jct.2016.06.001>

Temperature, K	Pressure, kPa	Speed of sound, m/s
299.79	86.00	1132.8
349.93	138.00	950.4
217.77	143.00	1445.1
249.84	159.00	1317.8
399.64	492.00	745.0
299.80	865.00	1138.2
249.86	992.00	1322.3
217.84	1031.00	1449.0
399.63	1090.00	752.7
349.94	1099.00	958.9
450.06	1639.00	499.2
349.97	1915.00	966.0
399.63	1986.00	764.1
249.87	2039.00	1328.0
299.81	2097.00	1146.6

450.04	2190.00	512.0
217.84	2256.00	1454.8
249.85	4937.00	1343.6
349.97	5044.00	992.5
299.81	5133.00	1166.5
399.62	5275.00	802.7
217.88	6084.00	1472.2
500.17	7568.00	371.1
217.00	8951.00	1489.1
249.85	9128.00	1365.3
500.15	9582.00	424.0
299.79	9677.00	1195.1
349.97	9682.00	1029.2
399.62	9782.00	850.0
249.86	10803.00	1373.6
249.85	19905.00	1417.6
299.80	20194.00	1256.1
399.61	20985.00	948.9
349.98	21490.00	1111.7
450.02	22115.00	792.1
500.11	22653.00	636.6
216.95	24689.00	1556.1
399.63	38384.00	1071.2
299.80	39488.00	1353.7
500.25	40483.00	812.4
216.87	41140.00	1619.7
249.85	41768.00	1512.2
349.98	42396.00	1232.7
449.97	42419.00	957.3
249.85	59235.00	1579.4
216.89	60566.00	1688.1
299.81	60935.00	1447.1
349.97	61179.00	1324.0
449.98	61580.00	1076.2
500.27	61769.00	961.8
399.63	61965.00	1203.3
216.90	78557.00	1746.2
249.85	80375.00	1653.1
500.27	80461.00	1067.0
399.61	80647.00	1291.3
349.97	81377.00	1409.9
299.89	81993.00	1527.9
449.99	82381.00	1183.6
249.85	96644.00	1705.5

349.97	96752.00	1469.0
299.88	97237.00	1581.4
399.60	97607.00	1362.4
450.00	97646.00	1252.6
500.27	98305.00	1153.8
216.97	98400.00	1805.5
216.96	121241.00	1868.7
399.66	122092.00	1454.2
450.00	122429.00	1352.4
299.85	123509.00	1665.9
349.94	123510.00	1562.0
500.28	123715.00	1261.3
249.85	124462.00	1787.6

Reference

<https://www.doi.org/10.1021/acs.jced.8b00938>

## Molar volume, m3/mol

Temperature, K - Liquid	Pressure, kPa - Liquid	Molar volume, m3/mol - Liquid
298.15	100.00	0.0001
298.15	10000.00	0.0001
313.15	100.00	0.0001
313.15	10000.00	0.0001
328.15	100.00	0.0001
328.15	10000.00	0.0001

Reference

<https://www.doi.org/10.1021/je800334m>

## Molar heat capacity at constant pressure, J/K/mol

Temperature, K - Liquid	Pressure, kPa - Liquid	Molar heat capacity at constant pressure, J/K/mol - Liquid
253.15	100.00	129.40
253.15	20000.00	126.10
253.15	40000.00	125.80
258.15	100.00	130.60
258.15	20000.00	128.30
258.15	40000.00	127.30
263.15	100.00	132.60

263.15	20000.00	130.70
263.15	40000.00	129.20
268.15	100.00	135.00
268.15	20000.00	133.40
268.15	40000.00	131.50
273.15	100.00	138.00
273.15	20000.00	136.30
273.15	40000.00	134.00
278.15	100.00	141.40
278.15	20000.00	139.40
278.15	40000.00	136.80
283.15	100.00	145.10
283.15	20000.00	142.60
283.15	40000.00	140.00
288.15	100.00	148.90
288.15	20000.00	146.00
288.15	40000.00	143.30
293.15	100.00	152.90
293.15	20000.00	149.60
293.15	40000.00	146.90
298.15	100.00	157.00
298.15	20000.00	153.30
298.15	40000.00	150.70
303.15	100.00	161.10
303.15	20000.00	157.10
303.15	40000.00	154.70
308.15	100.00	165.00
308.15	20000.00	161.10
308.15	40000.00	159.00
313.15	100.00	168.60
313.15	20000.00	165.00
313.15	40000.00	163.30
318.15	100.00	171.90
318.15	20000.00	169.10
318.15	40000.00	167.80
323.15	100.00	174.90
323.15	20000.00	173.20
323.15	40000.00	172.40

Reference

<https://www.doi.org/10.1016/j.tca.2010.05.012>

## Viscosity, Pa\*s

Temperature, K - Liquid	Pressure, kPa - Liquid	Viscosity, Pa*s - Liquid
298.15	81.50	0.0020670
Reference		<a href="https://www.doi.org/10.1016/j.jct.2016.12.036">https://www.doi.org/10.1016/j.jct.2016.12.036</a>

## Refractive index (Na D-line)

Temperature, K - Liquid	Pressure, kPa - Liquid	Refractive index (Na D-line) - Liquid
298.15	101.33	1.3752
293.15	101.00	1.37724
303.15	101.00	1.37286
313.15	101.00	1.36852
323.15	101.00	1.36363
Reference		<a href="https://www.doi.org/10.1016/j.jct.2010.08.019">https://www.doi.org/10.1016/j.jct.2010.08.019</a>

Temperature, K	Pressure, kPa	Refractive index (Na D-line)
298.15	100.00	1.37503
Reference		<a href="https://www.doi.org/10.1016/j.jct.2018.02.005">https://www.doi.org/10.1016/j.jct.2018.02.005</a>

## Mass density, kg/m3

Pressure, kPa - Liquid	Temperature, K - Liquid	Mass density, kg/m3 - Liquid
100.00	313.15	767.67
5000.00	313.15	772.3
10000.00	313.15	776.83
15000.00	313.15	781.04
20000.00	313.15	785.09
25000.00	313.15	788.94
30000.00	313.15	792.51
35000.00	313.15	796.05

40000.00	313.15	799.39
50000.00	313.15	805.89
60000.00	313.15	811.8
70000.00	313.15	817.44
80000.00	313.15	822.71
90000.00	313.15	827.67
100000.00	313.15	832.64
110000.00	313.15	837.15
120000.00	313.15	841.57
130000.00	313.15	845.79
140000.00	313.15	849.83
100.00	323.15	758.87
5000.00	323.15	763.96
10000.00	323.15	768.84
15000.00	323.15	773.34
20000.00	323.15	777.63
25000.00	323.15	781.69
30000.00	323.15	785.6
35000.00	323.15	789.17
40000.00	323.15	792.74
50000.00	323.15	799.4
60000.00	323.15	805.57
70000.00	323.15	811.34
80000.00	323.15	816.78
90000.00	323.15	822.03
100000.00	323.15	826.88
110000.00	323.15	831.63
120000.00	323.15	836.11
130000.00	323.15	840.39
140000.00	323.15	844.6
100.00	333.15	749.24
5000.00	333.15	754.45
10000.00	333.15	759.66
15000.00	333.15	764.42
20000.00	333.15	768.95
25000.00	333.15	773.18
30000.00	333.15	777.21
35000.00	333.15	781.18
40000.00	333.15	784.88
50000.00	333.15	791.92
60000.00	333.15	798.25
70000.00	333.15	804.32
80000.00	333.15	810.15
90000.00	333.15	815.49

100000.00	333.15	820.8
110000.00	333.15	825.59
120000.00	333.15	830.23
130000.00	333.15	834.5
140000.00	333.15	838.74
100.00	343.15	738.88
5000.00	343.15	744.75
10000.00	343.15	750.17
15000.00	343.15	755.4
20000.00	343.15	760.17
25000.00	343.15	764.81
30000.00	343.15	769.03
35000.00	343.15	773.28
40000.00	343.15	777.23
50000.00	343.15	784.53
60000.00	343.15	791.22
70000.00	343.15	797.48
80000.00	343.15	803.44
90000.00	343.15	808.87
100000.00	343.15	814.1
110000.00	343.15	819.16
120000.00	343.15	823.87
130000.00	343.15	828.44
140000.00	343.15	832.84
100.00	353.15	728.44
5000.00	353.15	734.66
10000.00	353.15	740.52
15000.00	353.15	745.99
20000.00	353.15	751.21
25000.00	353.15	756.02
30000.00	353.15	760.43
35000.00	353.15	764.79
40000.00	353.15	768.87
50000.00	353.15	777.01
60000.00	353.15	783.94
70000.00	353.15	790.65
80000.00	353.15	796.56
90000.00	353.15	802.3
100000.00	353.15	807.6
110000.00	353.15	812.87
120000.00	353.15	817.76
130000.00	353.15	822.37
140000.00	353.15	826.85
5000.00	363.15	723.93

10000.00	363.15	730.44
15000.00	363.15	736.42
20000.00	363.15	741.95
25000.00	363.15	747.05
30000.00	363.15	751.95
35000.00	363.15	756.37
40000.00	363.15	760.76
50000.00	363.15	769.06
60000.00	363.15	776.43
70000.00	363.15	783.33
80000.00	363.15	789.52
90000.00	363.15	795.58
100000.00	363.15	801.38
110000.00	363.15	806.5
120000.00	363.15	811.57
130000.00	363.15	816.39
140000.00	363.15	820.9
5000.00	373.15	712.57
10000.00	373.15	719.75
15000.00	373.15	726.13
20000.00	373.15	732.08
25000.00	373.15	737.65
30000.00	373.15	742.73
35000.00	373.15	747.59
40000.00	373.15	752.29
50000.00	373.15	760.75
60000.00	373.15	768.5
70000.00	373.15	775.82
80000.00	373.15	782.24
90000.00	373.15	788.49
100000.00	373.15	794.34
110000.00	373.15	799.85
120000.00	373.15	805.17
130000.00	373.15	810.06
140000.00	373.15	814.94
5000.00	383.15	700.32
10000.00	383.15	708.06
15000.00	383.15	715.03
20000.00	383.15	721.43
25000.00	383.15	727.35
30000.00	383.15	732.77
35000.00	383.15	737.95
40000.00	383.15	742.76
50000.00	383.15	751.85



60000.00	383.15	760.06
70000.00	383.15	767.53
80000.00	383.15	774.49
90000.00	383.15	780.94
100000.00	383.15	786.9
110000.00	383.15	792.77
120000.00	383.15	798.27
130000.00	383.15	803.3
140000.00	383.15	808.26
5000.00	393.15	687.82
10000.00	393.15	696.15
15000.00	393.15	703.77
20000.00	393.15	710.73
25000.00	393.15	717.07
30000.00	393.15	722.91
35000.00	393.15	728.4
40000.00	393.15	733.66
50000.00	393.15	743.39
60000.00	393.15	751.87
70000.00	393.15	759.71
80000.00	393.15	766.86
90000.00	393.15	773.67
100000.00	393.15	779.96
110000.00	393.15	785.9
120000.00	393.15	791.54
130000.00	393.15	796.8
140000.00	393.15	801.97
5000.00	403.15	674.03
10000.00	403.15	683.54
15000.00	403.15	691.9
20000.00	403.15	699.4
25000.00	403.15	706.26
30000.00	403.15	712.66
35000.00	403.15	718.38
40000.00	403.15	724.01
50000.00	403.15	734.72
60000.00	403.15	743.58
70000.00	403.15	751.89
80000.00	403.15	759.17
90000.00	403.15	766.2
100000.00	403.15	772.7
110000.00	403.15	778.85
120000.00	403.15	784.7
130000.00	403.15	790.2

140000.00	403.15	795.51
Reference	<a href="https://www.doi.org/10.1016/j.fluid.2013.08.007">https://www.doi.org/10.1016/j.fluid.2013.08.007</a>	

Pressure, kPa	Temperature, K	Mass density, kg/m3
117.90	280.21	797.61
186.70	300.09	780.22
202.70	325.12	757.05
220.40	350.14	731.92
349.50	375.01	702.23
407.60	392.57	679.26
439.60	280.21	797.89
609.40	325.12	757.49
610.50	300.09	780.62
663.40	350.14	732.49
703.30	375.01	702.82
888.70	392.57	680.18
938.70	280.21	798.29
953.40	300.09	780.94
960.00	325.12	757.87
1046.80	375.01	703.38
1071.20	350.14	733.03
1171.40	392.57	680.72
1253.90	325.12	758.21
1328.40	280.21	798.62
1339.50	300.09	781.31
1412.60	350.14	733.49
1437.50	375.01	704.01
1526.60	392.57	681.39
1638.80	325.12	758.63
1656.60	280.21	798.89
1722.10	300.09	781.66
1791.60	375.01	704.58
1844.70	350.14	734.07
1897.40	392.57	682.08
1944.90	280.21	799.14
2021.00	325.12	759.06
2044.80	300.09	781.96
2161.70	375.01	705.16
2226.70	350.14	734.58
2272.30	392.57	682.77
2328.80	325.12	759.39
2440.60	280.21	799.56

2446.40	300.09	782.34
2545.70	375.01	705.76
2619.10	392.57	683.41
2644.70	350.14	735.11
2655.80	325.15	759.75
2834.60	300.09	782.7
2842.70	350.14	735.41
2850.60	280.21	799.88
2909.90	375.01	706.34
3014.90	325.12	760.15
3050.40	392.57	684.2
3198.00	280.21	800.17
3224.90	300.09	783.06
3286.90	350.14	735.99
3321.40	325.12	760.48
3364.10	375.01	707.04
3411.20	392.57	684.86
3630.70	350.14	736.45
3659.40	325.12	760.85
3671.10	300.09	783.47
3677.60	375.01	707.53
3679.10	280.21	800.56
3835.00	392.57	685.63
4004.10	325.12	761.22
4012.20	350.14	736.94
4071.10	280.21	800.9
4074.10	300.09	783.84
4083.20	375.01	708.16
4095.70	392.57	686.12
4362.50	300.09	784.11
4394.60	350.14	737.43
4399.20	325.12	761.65
4437.70	280.21	801.19
4515.70	375.01	708.82
4524.90	392.57	686.89
4691.20	325.12	761.97
4757.60	350.14	737.91
4771.80	300.09	784.48
4832.60	280.21	801.5
4853.50	375.01	709.33
4902.80	392.57	687.57
5010.70	325.12	762.32
5182.10	280.21	801.8
5197.90	350.14	738.48

5226.50	300.09	784.89
5280.20	375.01	709.98
5283.50	392.57	688.24
5383.40	325.12	762.71
5559.10	280.21	802.1
5577.90	350.14	738.96
5579.20	300.09	785.21
5646.90	375.01	710.53
5730.50	325.12	763.08
5775.90	392.57	689.09
5910.00	280.21	802.39
5939.30	350.14	739.42
6001.60	300.09	785.59
6039.60	392.57	689.55
6138.10	375.01	711.26
6143.60	325.12	763.52
6321.30	350.14	739.89
6334.90	280.21	802.73
6427.20	300.09	785.98
6447.10	375.01	711.73
6476.60	392.57	690.3
6525.60	325.12	763.91
6730.90	350.14	740.41
6750.90	280.21	803.06
6780.30	300.09	786.29
6880.90	375.01	712.37
6889.70	392.57	691.01
6903.20	325.12	764.31
7119.70	350.14	740.89
7166.50	281.21	803.39
7214.70	300.09	786.68
7269.80	375.01	712.94
7293.80	325.12	764.72
7348.00	392.57	691.78
7564.40	350.14	741.45
7592.00	280.21	803.74
7629.90	300.09	787.05
7661.90	325.12	765.11
7728.00	392.57	692.42
7772.40	375.01	713.68
7918.60	325.12	765.38
7988.50	350.14	741.97
7999.00	280.21	804.07
8020.30	300.09	787.4

8119.20	375.01	714.18
8172.70	392.57	693.17
8254.40	325.12	765.72
8329.00	280.21	804.33
8417.50	300.09	787.75
8472.50	350.14	742.55
8557.20	375.01	714.81
8598.30	392.57	693.88
8755.50	325.12	766.24
8805.70	300.09	788.1
8817.00	280.21	804.7
8925.80	350.14	743.13
8987.30	375.01	715.42
9018.50	392.57	694.57
9212.90	300.09	788.45
9280.80	350.14	743.56
9350.60	280.21	805.11
9405.00	392.57	695.2
9423.80	375.01	716.04
9621.50	300.09	788.81
9658.50	280.21	805.38
9676.30	350.14	744.05
9837.90	392.57	695.89
9842.20	375.01	716.64

Reference

<https://www.doi.org/10.1016/j.jct.2008.12.014>

Temperature, K	Pressure, kPa	Mass density, kg/m3
293.15	100.00	785.0
293.15	10000.00	793.2
293.15	20000.00	800.6
293.15	30000.00	807.4
293.15	40000.00	813.7
293.15	50000.00	819.6
293.15	60000.00	825.1
293.15	70000.00	830.4
293.15	80000.00	835.3
293.15	90000.00	840.1
293.15	100000.00	844.6
293.15	110000.00	848.9
293.15	120000.00	853.1
293.15	130000.00	857.1
293.15	140000.00	861.0

303.15	100.00	776.6
303.15	10000.00	785.3
303.15	20000.00	793.3
303.15	30000.00	800.2
303.15	40000.00	806.9
303.15	50000.00	813.1
303.15	60000.00	818.9
303.15	70000.00	824.3
303.15	80000.00	829.1
303.15	90000.00	834.2
303.15	100000.00	838.8
303.15	110000.00	843.1
303.15	120000.00	847.3
303.15	130000.00	851.4
303.15	140000.00	855.2
313.15	100.00	767.8
313.15	10000.00	777.1
313.15	20000.00	785.4
313.15	30000.00	792.9
313.15	40000.00	799.8
313.15	50000.00	806.2
313.15	60000.00	812.1
313.15	70000.00	817.6
313.15	80000.00	822.8
313.15	90000.00	827.8
313.15	100000.00	832.6
313.15	110000.00	837.3
313.15	120000.00	841.5
313.15	130000.00	845.8
313.15	140000.00	849.7
323.15	100.00	758.7
323.15	10000.00	768.6
323.15	20000.00	777.3
323.15	30000.00	785.2
323.15	40000.00	792.4
323.15	50000.00	799.0
323.15	60000.00	805.2
323.15	70000.00	811.0
323.15	80000.00	816.4
323.15	90000.00	821.6
323.15	100000.00	826.6
323.15	110000.00	831.3
323.15	120000.00	835.7
323.15	130000.00	840.0

323.15	140000.00	844.2
333.15	100.00	749.2
333.15	10000.00	759.7
333.15	20000.00	769.1
333.15	30000.00	777.4
333.15	40000.00	785.0
333.15	50000.00	792.0
333.15	60000.00	798.5
333.15	70000.00	804.5
333.15	80000.00	810.1
333.15	90000.00	815.6
333.15	100000.00	820.6
333.15	110000.00	825.4
333.15	120000.00	830.0
333.15	130000.00	834.4
333.15	140000.00	838.5
343.15	100.00	738.8
343.15	10000.00	750.2
343.15	20000.00	760.1
343.15	30000.00	768.8
343.15	40000.00	776.8
343.15	50000.00	784.1
343.15	60000.00	790.9
343.15	70000.00	797.1
343.15	80000.00	803.0
343.15	90000.00	808.6
343.15	100000.00	813.9
343.15	110000.00	818.9
343.15	120000.00	823.8
343.15	130000.00	828.3
343.15	140000.00	832.7
353.15	100.00	728.3
353.15	10000.00	740.5
353.15	20000.00	751.1
353.15	30000.00	760.6
353.15	40000.00	768.9
353.15	50000.00	776.6
353.15	60000.00	783.7
353.15	70000.00	790.3
353.15	80000.00	796.4
353.15	90000.00	802.1
353.15	100000.00	807.5
353.15	110000.00	812.6
353.15	120000.00	817.5

353.15	130000.00	822.3
353.15	140000.00	826.7
363.15	10000.00	730.2
363.15	20000.00	741.7
363.15	30000.00	751.7
363.15	40000.00	760.6
363.15	50000.00	768.7
363.15	60000.00	776.0
363.15	70000.00	782.8
363.15	80000.00	789.2
363.15	90000.00	795.2
363.15	100000.00	800.8
363.15	110000.00	806.2
363.15	120000.00	811.3
363.15	130000.00	816.2
363.15	140000.00	820.8
373.15	10000.00	719.5
373.15	20000.00	731.9
373.15	30000.00	742.6
373.15	40000.00	752.1
373.15	50000.00	760.5
373.15	60000.00	768.2
373.15	70000.00	775.4
373.15	80000.00	782.1
373.15	90000.00	788.4
373.15	100000.00	794.2
373.15	110000.00	799.8
373.15	120000.00	805.0
373.15	130000.00	810.0
373.15	140000.00	814.7
383.15	10000.00	708.0
383.15	20000.00	721.5
383.15	30000.00	732.9
383.15	40000.00	743.1
383.15	50000.00	752.0
383.15	60000.00	760.1
383.15	70000.00	767.6
383.15	80000.00	774.6
383.15	90000.00	781.0
383.15	100000.00	787.1
383.15	110000.00	792.8
383.15	120000.00	798.3
383.15	130000.00	803.5
383.15	140000.00	808.5



393.15	10000.00	696.3
393.15	20000.00	710.9
393.15	30000.00	723.2
393.15	40000.00	733.7
393.15	50000.00	743.1
393.15	60000.00	751.7
393.15	70000.00	759.6
393.15	80000.00	766.6
393.15	90000.00	773.6
393.15	100000.00	779.9
393.15	110000.00	785.9
393.15	120000.00	791.5
393.15	130000.00	796.8
393.15	140000.00	801.6
403.15	10000.00	683.7
403.15	20000.00	699.5
403.15	30000.00	712.8
403.15	40000.00	724.1
403.15	50000.00	734.2
403.15	60000.00	743.2
403.15	70000.00	751.4
403.15	80000.00	758.9
403.15	90000.00	766.0
403.15	100000.00	772.5
403.15	110000.00	778.7
403.15	120000.00	784.5
403.15	130000.00	790.1
403.15	140000.00	795.4

Reference

<https://www.doi.org/10.1016/j.jct.2012.05.016>

Temperature, K	Pressure, kPa	Mass density, kg/m3
302.90	1040.00	778.1
302.90	2000.00	778.9
302.90	2990.00	779.8
302.90	4060.00	780.8
302.90	5010.00	781.6
302.90	6000.00	782.5
302.90	7020.00	783.4
302.90	8020.00	784.3
302.90	9000.00	785.1
302.90	10000.00	786.0
323.00	1000.00	760.6

323.00	2020.00	761.6
323.00	3000.00	762.7
323.00	4070.00	763.7
323.00	5000.00	764.7
323.00	6010.00	765.7
323.00	7020.00	766.7
323.00	8010.00	767.7
323.00	9010.00	768.6
323.00	10020.00	769.6

Reference

<https://www.doi.org/10.1016/j.jct.2013.05.040>

Temperature, K	Pressure, kPa	Mass density, kg/m3
293.15	100.00	785.4
293.15	1000.00	786.2
293.15	5000.00	789.6
293.15	10000.00	793.6
293.15	15000.00	797.4
293.15	20000.00	801.1
293.15	25000.00	804.5
293.15	30000.00	807.9
293.15	35000.00	811.2
293.15	40000.00	814.2
293.15	45000.00	817.2
293.15	50000.00	820.1
293.15	55000.00	822.9
293.15	60000.00	825.6
293.15	65000.00	828.2
293.15	70000.00	830.8
293.15	80000.00	835.8
293.15	90000.00	840.5
293.15	100000.00	845.0
293.15	110000.00	849.4
293.15	120000.00	853.5
293.15	130000.00	857.6
293.15	140000.00	861.2
298.15	100.00	781.4
298.15	1000.00	782.1
298.15	5000.00	785.6
298.15	10000.00	789.8
298.15	15000.00	793.7
298.15	20000.00	797.3
298.15	25000.00	800.9

298.15	30000.00	804.3
298.15	35000.00	807.7
298.15	40000.00	810.8
298.15	45000.00	813.8
298.15	50000.00	816.7
298.15	55000.00	819.7
298.15	60000.00	822.5
298.15	65000.00	825.2
298.15	70000.00	827.6
298.15	80000.00	832.8
298.15	90000.00	837.5
298.15	100000.00	842.3
298.15	110000.00	846.4
298.15	120000.00	850.8
298.15	130000.00	854.8
298.15	140000.00	858.7
313.15	100.00	768.2
313.15	1000.00	769.1
313.15	5000.00	773.0
313.15	10000.00	777.4
313.15	15000.00	781.8
313.15	20000.00	785.7
313.15	25000.00	789.5
313.15	30000.00	793.3
313.15	35000.00	796.9
313.15	40000.00	800.1
313.15	45000.00	803.4
313.15	50000.00	806.5
313.15	55000.00	809.6
313.15	60000.00	812.5
313.15	65000.00	815.4
313.15	70000.00	818.2
313.15	80000.00	823.4
313.15	90000.00	828.5
313.15	100000.00	833.1
313.15	110000.00	837.8
313.15	120000.00	842.1
313.15	130000.00	846.4
313.15	140000.00	850.4
333.15	100.00	749.4
333.15	1000.00	750.5
333.15	5000.00	754.9
333.15	10000.00	760.0
333.15	15000.00	764.9

333.15	20000.00	769.3
333.15	25000.00	773.6
333.15	30000.00	777.7
333.15	35000.00	781.5
333.15	40000.00	785.3
333.15	45000.00	788.9
333.15	50000.00	792.3
333.15	55000.00	795.6
333.15	60000.00	798.7
333.15	65000.00	801.8
333.15	70000.00	804.8
333.15	80000.00	810.5
333.15	90000.00	815.9
333.15	100000.00	820.9
333.15	110000.00	825.8
333.15	120000.00	830.4
333.15	130000.00	834.8
333.15	140000.00	839.2
353.15	1000.00	729.8
353.15	5000.00	735.0
353.15	10000.00	741.0
353.15	15000.00	746.5
353.15	20000.00	751.7
353.15	25000.00	756.5
353.15	30000.00	761.0
353.15	35000.00	765.4
353.15	40000.00	769.3
353.15	45000.00	773.3
353.15	50000.00	777.0
353.15	55000.00	780.6
353.15	60000.00	784.0
353.15	65000.00	787.4
353.15	70000.00	790.6
353.15	80000.00	796.7
353.15	90000.00	802.6
353.15	100000.00	808.0
353.15	110000.00	813.2
353.15	120000.00	818.1
353.15	130000.00	822.8
353.15	140000.00	827.3
373.15	1000.00	706.6
373.15	5000.00	712.8
373.15	10000.00	719.9
373.15	15000.00	726.3

373.15	20000.00	732.0
373.15	25000.00	737.7
373.15	30000.00	742.9
373.15	35000.00	747.8
373.15	40000.00	752.2
373.15	45000.00	756.6
373.15	50000.00	760.7
373.15	55000.00	764.7
373.15	60000.00	768.6
373.15	65000.00	772.1
373.15	70000.00	775.6
373.15	80000.00	782.3
373.15	90000.00	788.5
373.15	100000.00	794.4
373.15	110000.00	799.9
373.15	120000.00	805.3
373.15	130000.00	810.2
373.15	140000.00	815.1
393.15	1000.00	680.4
393.15	5000.00	688.2
393.15	10000.00	696.7
393.15	15000.00	704.4
393.15	20000.00	711.4
393.15	25000.00	717.6
393.15	30000.00	723.5
393.15	35000.00	729.0
393.15	40000.00	734.2
393.15	45000.00	739.0
393.15	50000.00	743.5
393.15	55000.00	747.9
393.15	60000.00	752.1
393.15	65000.00	756.1
393.15	70000.00	760.0
393.15	80000.00	767.2
393.15	90000.00	773.9
393.15	100000.00	780.2
393.15	110000.00	786.2
393.15	120000.00	791.8
393.15	130000.00	797.2
393.15	140000.00	802.3
303.15	100.00	777.0
293.15	100.00	785.46
313.15	100.00	768.21
323.15	100.00	759.07

298.15	100.00	781.27
333.15	100.00	749.42
Reference		<a href="https://www.doi.org/10.1016/j.jct.2018.12.018">https://www.doi.org/10.1016/j.jct.2018.12.018</a>

Temperature, K	Pressure, kPa	Mass density, kg/m3
298.15	81.50	780.99
Reference		<a href="https://www.doi.org/10.1021/acs.jced.5b00162">https://www.doi.org/10.1021/acs.jced.5b00162</a>

Temperature, K	Pressure, kPa	Mass density, kg/m3
298.15	100.00	781.3
Reference		<a href="https://www.doi.org/10.1021/acs.jced.7b00141">https://www.doi.org/10.1021/acs.jced.7b00141</a>

Temperature, K	Pressure, kPa	Mass density, kg/m3
283.15	100.00	793.7
283.15	5000.00	797.5
283.15	10000.00	801.3
283.15	20000.00	808.9
283.18	15000.00	805.2
298.15	100.00	781.2
298.15	5000.00	785.5
298.15	10000.00	789.7
298.15	15000.00	793.8
298.15	20000.00	797.6
313.15	100.00	768.1
313.15	5000.00	773.0
313.15	10000.00	777.5
313.15	15000.00	781.9
313.15	20000.00	786.1
328.15	100.00	754.4
328.15	5000.00	759.6
328.15	15000.00	769.5
328.15	20000.00	774.0
328.18	10000.00	764.8
Reference		<a href="https://www.doi.org/10.1021/je100581m">https://www.doi.org/10.1021/je100581m</a>

## Sources

### Joback Method:

[illegible]

[https://en.wikipedia.org/wiki/Joback\\_method](https://en.wikipedia.org/wiki/Joback_method)

<https://www.doi.org/10.1021/acs.jced.8b00938>

<https://www.doi.org/10.1016/j.jct.2014.12.023>

<https://www.doi.org/10.1021/acs.iced.8b00023>

<https://www.doi.org/10.1021/je900327x>

<https://www.doi.org/10.1021/acs.jced.8b00025>

<https://www.doi.org/10.1021/je900240s>

<https://www.doi.org/10.1016/j.fluid.2019.06.016>

<https://www.doi.org/10.1016/j.fluid.2006.01.008>

<https://www.doi.org/10.1021/ie800664z>

<https://www.doi.org/10.1021/je5003708>

<https://www.doi.org/10.1021/acs.iced.6b00796>

<https://www.doi.org/10.1021/acs.iced.8b00309>

<https://www.doi.org/10.1016/j.fluid.2007.04.030>

<https://www.doi.org/10.1021/ie100998r>

<https://www.doi.org/10.1016/j.jct.2018.08.004>

<https://www.doi.org/10.1021/acs.iced.8b00632>

<https://www.doi.org/10.1016/j.jct.2017.11.017>

<https://www.doi.org/10.1021/je300692s>

<https://www.doi.org/10.1021/je9003806>

<https://www.doi.org/10.1016/j.fluid.2005.02.015>

<https://www.doi.org/10.1016/j.jct.2016.03.039>

<https://www.doi.org/10.1016/j.jct.2013.05.008>

<https://www.doi.org/10.1016/j.jct.2016.09.037>

<https://www.doi.org/10.1021/je400639m>

<https://www.doi.org/10.1021/je500457p>

<https://www.doi.org/10.1016/j.jct.2016.07.017>

<https://www.doi.org/10.1021/je8003194>

<https://www.doi.org/10.1021/acs.jced.5b00190>

<https://www.doi.org/10.1016/j.tca.2019.03.024>

<https://www.doi.org/10.1016/j.jct.2018.10.022>

<https://www.doi.org/10.1021/je400838e>

<https://www.doi.org/10.1021/je060305e>

<https://www.doi.org/10.1016/j.fluid.2013.11.005>

<https://www.doi.org/10.1016/j.jct.2008.01.002>

<https://www.doi.org/10.1021/je501019y>

<https://www.doi.org/10.1021/je800790a>

<https://www.doi.org/10.1016/j.ijct.2006.04.006>

<https://www.doi.org/10.1021/acs.iced.6b00613>

[illegible]

<https://www.doi.org/10.1016/j.jct.2017.10.003>  
<https://www.doi.org/10.1016/j.jct.2014.08.026>  
<https://www.doi.org/10.1021/je7007445>  
<https://www.doi.org/10.1021/acs.jced.8b00776>  
<https://www.doi.org/10.1016/j.jct.2016.10.014>  
<https://www.doi.org/10.1021/je500153g>  
<https://www.doi.org/10.1016/j.jct.2017.07.004>  
<https://www.doi.org/10.1016/j.fluid.2015.03.043>  
<https://www.doi.org/10.1021/acs.jced.8b00785>  
<https://www.doi.org/10.1016/j.jct.2016.08.007>  
<https://www.doi.org/10.1016/j.jct.2019.03.021>  
<https://www.doi.org/10.1016/j.jct.2005.06.016>  
<https://www.doi.org/10.1016/j.tca.2005.03.009>  
<https://www.doi.org/10.1016/j.jct.2016.09.012>  
<https://www.doi.org/10.1021/acs.jced.5b00814>  
<https://www.doi.org/10.1016/j.fluid.2007.07.030>  
<https://www.doi.org/10.1021/acs.jced.5b00565>  
<https://www.doi.org/10.1021/je500482k>  
<https://www.doi.org/10.1021/acs.jced.7b00335>  
<https://www.doi.org/10.1016/j.fluid.2015.09.003>  
<https://www.doi.org/10.1021/acs.jced.9b00930>  
<https://www.doi.org/10.1016/j.jct.2009.12.001>  
<https://www.doi.org/10.1021/je500437m>  
<https://www.doi.org/10.1021/acs.jced.5b00680>  
<https://www.doi.org/10.1021/je600525e>  
<https://www.doi.org/10.1016/j.jct.2016.11.019>  
<https://www.doi.org/10.1021/je7003947>  
<https://www.doi.org/10.1021/acs.jced.9b00353>  
<https://www.doi.org/10.1021/je0602723>  
<https://www.doi.org/10.1021/acs.jced.5b00162>  
<https://www.doi.org/10.1021/je8008039>  
<https://www.doi.org/10.1021/je9006037>  
<https://www.doi.org/10.1016/j.jct.2016.11.014>  
<https://www.doi.org/10.1016/j.jct.2008.12.021>  
<https://www.doi.org/10.1021/je049978s>  
<https://www.doi.org/10.1016/j.fluid.2018.03.011>  
<https://www.doi.org/10.1021/acs.jced.8b00361>  
<https://www.doi.org/10.1021/acs.jced.8b00139>  
<https://www.doi.org/10.1021/je050052+>  
<https://www.doi.org/10.1016/j.jct.2006.03.006>  
<https://www.doi.org/10.1016/j.fluid.2018.09.023>  
<https://www.doi.org/10.1021/je200531k>  
<https://www.doi.org/10.1021/acs.jced.7b00489>



<https://www.doi.org/10.1016/j.jct.2016.08.008>  
<https://www.doi.org/10.1016/j.jct.2015.04.025>  
<https://www.doi.org/10.1016/j.fluid.2012.10.019>  
<https://www.doi.org/10.1021/je800145h>  
<https://www.doi.org/10.1016/j.jct.2019.05.007>  
<https://www.doi.org/10.1021/je900966r>  
<https://www.doi.org/10.1021/acs.jced.9b00658>  
<https://www.doi.org/10.1016/j.jct.2012.06.009>  
<https://www.doi.org/10.1016/j.jct.2017.04.019>  
<https://www.doi.org/10.1021/je2000292>  
<https://www.doi.org/10.1016/j.fluid.2015.07.032>  
<https://www.doi.org/10.1016/j.jct.2012.02.036>  
<https://www.doi.org/10.1016/j.jct.2018.05.003>  
<https://www.doi.org/10.1016/j.fluid.2012.06.012>  
<https://www.doi.org/10.1016/j.jct.2005.05.007>  
<https://www.doi.org/10.1021/je700626v>  
<https://www.doi.org/10.1016/j.jct.2013.01.007>  
<https://www.doi.org/10.1021/acs.jced.9b00278>  
<https://www.doi.org/10.1016/j.jct.2016.08.017>  
<https://www.doi.org/10.1016/j.fluid.2007.10.016>  
<https://www.doi.org/10.1021/je050515b>  
<https://www.doi.org/10.1016/j.tca.2005.06.011>  
<https://www.doi.org/10.1021/je800017j>  
<https://www.cheric.org/files/research/kdb/mol/mol820.mol>

<https://www.doi.org/10.1016/j.jct.2013.10.038>  
<https://www.doi.org/10.1016/j.fluid.2010.10.003>  
<https://www.doi.org/10.1016/j.jct.2019.02.004>  
<https://www.doi.org/10.1016/j.jct.2012.03.015>  
<https://www.doi.org/10.1021/acs.jced.9b00497>  
<https://www.doi.org/10.1021/acs.jced.7b00665>  
<https://www.doi.org/10.1021/acs.jced.8b00844>  
<https://www.doi.org/10.1016/j.fluid.2013.05.031>  
<https://www.doi.org/10.1021/acs.jced.6b00741>  
<https://www.doi.org/10.1021/je201010s>  
<https://www.doi.org/10.1021/je800668j>  
<https://www.doi.org/10.1016/j.fluid.2013.09.058>  
<https://www.doi.org/10.1016/j.jct.2017.04.014>  
<https://www.doi.org/10.1016/j.fluid.2018.03.009>  
<https://www.doi.org/10.1016/j.jct.2005.08.004>  
<https://www.doi.org/10.1016/j.jct.2013.05.011>  
<https://www.doi.org/10.1021/acs.jced.8b00863>  
<https://www.doi.org/10.1016/j.jct.2015.11.006>

[illegible]

<https://www.doi.org/10.1016/j.fluid.2012.06.013>

<https://www.doi.org/10.1016/j.ijct.2015.12.032>

<https://www.doi.org/10.1021/ie050540h>

<https://www.doi.org/10.1021/ie400714f>

<https://www.doi.org/10.1021/ie500867u>

<https://www.doi.org/10.1021/acs.jced.8b01144>

<https://www.doi.org/10.1021/ie0301904>

<https://www.doi.org/10.1016/j.ijct.2015.04.017>

<https://www.doi.org/10.1016/j.ijct.2019.04.010>

<https://www.doi.org/10.1021/ie9000922>

<https://www.doi.org/10.1021/acs.jced.7b00141>

<https://www.doi.org/10.1021/acs.jced.6b00646>

<https://www.doi.org/10.1021/acs.jced.6b00816>

<https://www.doi.org/10.1016/j.fluid.2012.05.006>

<https://www.doi.org/10.1016/j.tsc.2012.04.033>

<https://www.doi.org/10.1021/ie200806n>

<https://www.doi.org/10.1016/j.fluid.2013.03.015>

<https://www.doi.org/10.1016/j.ijct.2017.06.013>

<https://www.doi.org/10.1021/acs.iced.8b00163>

<https://www.doi.org/10.1016/j.ijct.2013.07.031>

<https://www.doi.org/10.1016/j.fluid.2013.11.031>

<https://www.doi.org/10.1031/cas-icod.7b00118>

<https://www.doi.org/10.1031/acs.jced.5b00035>

<https://www.doi.org/10.1016/j.ijct.2018.12.010>

<https://www.doi.org/10.1031/acs.jced.3b00615>

<https://www.doi.org/10.1031/jc000464g>

<https://www.doi.org/10.1031/acs.joc.5b00385>

<https://www.doi.org/10.1016/j.jst.2018.12.025>

<https://www.doi.org/10.1001/ja.501414d>

<https://www.doi.org/10.1001/asci.2023.15>

DOI: 10.1016/j.fluid.2009.11.005

https://doi.org/10.1001/jama.1991.1910335

<https://doi.org/10.1016/j.jmb.2021.107900>

11. // 11.10.1987 // 19.10.1987 // 20.10.1987

14. "1991" (1991) 00000001

[illegible]

**Figure 1** | The effect of the number of trials on the accuracy of the classification results.

100% // 100% // 100% // 100% // 100% // 100% // 100% // 100% // 100% // 100%

1. *What is the purpose of the study?*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6111111/>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6202222/>

<https://www.industry.gov.au/publications/industry-2020-2021-report>

<https://www.ashenergy.com/energy/1/ash-journal-2020>

<https://www.washpost.com/archive/1999/01/01/000001-1p>



[illegible]

<https://www.doi.org/10.1016/j.tca.2009.06.015>  
<https://www.doi.org/10.1016/j.jct.2013.05.024>  
<https://www.doi.org/10.1016/j.tca.2014.07.022>  
<https://www.doi.org/10.1021/acs.jced.8b01099>  
<https://www.doi.org/10.1016/j.fluid.2016.05.029>  
<https://www.doi.org/10.1016/j.jct.2007.03.007>  
<https://www.doi.org/10.1016/j.jct.2018.02.005>  
<https://www.doi.org/10.1016/j.jct.2019.105880>  
<https://www.doi.org/10.1021/acs.jced.7b00768>  
<https://www.doi.org/10.1021/je700700f>  
<https://www.doi.org/10.1016/j.jct.2018.01.003>  
<https://www.doi.org/10.1021/acs.jced.8b00895>  
<https://www.doi.org/10.1021/acs.jced.7b00585>  
<https://www.doi.org/10.1016/j.jct.2005.04.015>  
<https://www.doi.org/10.1016/j.fluid.2010.10.008>  
<https://www.doi.org/10.1016/j.jct.2018.12.045>  
<https://www.doi.org/10.1021/acs.jced.9b00179>  
<https://www.doi.org/10.1021/acs.jced.6b00210>  
<https://www.doi.org/10.1021/je101072d>  
<https://www.doi.org/10.1021/je5002158>  
<https://www.doi.org/10.1021/je049549u>  
<https://www.doi.org/10.1016/j.jct.2019.06.009>  
<https://www.doi.org/10.1016/j.fluid.2011.12.004>  
<https://www.doi.org/10.1021/je0498560>  
<https://www.doi.org/10.1021/acs.jced.9b00220>  
<https://www.doi.org/10.1016/j.jct.2005.06.011>  
<https://www.doi.org/10.1021/acs.jced.9b00147>  
<https://www.doi.org/10.1021/je7002989>  
<https://www.doi.org/10.1021/je034027k>  
<https://www.doi.org/10.1021/je300994y>  
<https://www.doi.org/10.1021/je100022w>  
<https://www.doi.org/10.1021/acs.jced.9b00661>  
<https://www.doi.org/10.1016/j.fluid.2016.09.014>  
<https://www.doi.org/10.1021/je101168w>  
<https://www.doi.org/10.1016/j.jct.2017.02.011>  
<https://www.doi.org/10.1016/j.jct.2016.07.009>  
<https://www.doi.org/10.1016/j.jct.2018.12.038>  
<https://www.doi.org/10.1021/je800689a>  
<https://www.doi.org/10.1016/j.fluid.2015.03.036>  
<https://www.doi.org/10.1016/j.jct.2009.06.024>  
<https://www.doi.org/10.1016/j.tca.2013.02.010>  
<https://www.doi.org/10.1021/je0201727>  
<https://www.doi.org/10.1021/je0341413>

[illegible]

<https://www.doi.org/10.1021/je700179q>  
<https://www.doi.org/10.1021/acs.jced.6b00721>  
<https://www.doi.org/10.1016/j.fluid.2005.05.024>  
<https://www.doi.org/10.1021/je100581m>  
<https://www.doi.org/10.1016/j.jct.2013.10.026>  
<https://www.doi.org/10.1016/j.tca.2012.07.022>  
<https://www.doi.org/10.1016/j.jct.2016.10.037>  
<https://www.doi.org/10.1016/j.jct.2019.105882>  
<https://www.doi.org/10.1021/acs.jced.7b00978>  
<https://www.doi.org/10.1021/acs.jced.8b00663>  
<https://www.doi.org/10.1021/je900977e>  
<https://www.doi.org/10.1016/j.fluid.2006.03.021>  
<https://www.doi.org/10.1021/je030175z>  
<https://www.doi.org/10.1021/acs.jced.5b01023>  
<https://www.doi.org/10.1016/j.jct.2016.01.026>  
<https://www.doi.org/10.1021/acs.jced.8b00765>  
<https://www.doi.org/10.1021/je900214y>  
<https://www.doi.org/10.1021/je0342421>  
<https://www.doi.org/10.1016/j.jct.2016.07.043>  
<https://www.doi.org/10.1016/j.fluid.2014.01.008>  
<https://www.doi.org/10.1021/je500848q>  
<https://www.doi.org/10.1021/acs.jced.8b00547>  
<https://www.doi.org/10.1021/acs.jced.5b00184>  
<https://www.doi.org/10.1021/acs.jced.8b00067>  
<https://www.doi.org/10.1016/j.jct.2013.12.031>  
<https://www.doi.org/10.1021/je201349k>  
<https://www.doi.org/10.1021/je401044h>  
<https://www.doi.org/10.1021/je200195q>  
<https://www.doi.org/10.1021/je0341211>  
<https://www.doi.org/10.1021/acs.jced.9b00190>  
<https://www.doi.org/10.1021/je1012839>  
<https://www.doi.org/10.1016/j.jct.2013.05.027>  
<https://www.doi.org/10.1016/j.jct.2016.07.050>  
<https://www.doi.org/10.1016/j.jct.2012.05.016>  
<https://www.doi.org/10.1016/j.jct.2017.03.011>  
<https://www.doi.org/10.1021/je4000197>  
<https://www.doi.org/10.1016/j.jct.2016.10.040>  
<https://www.doi.org/10.1021/acs.jced.9b00216>  
<https://www.doi.org/10.1021/je2000233>  
<https://www.doi.org/10.1021/acs.jced.8b00720>  
<https://www.doi.org/10.1016/j.fluid.2015.06.026>  
<https://www.doi.org/10.1016/j.fluid.2012.11.001>  
<https://www.doi.org/10.1021/je400864f>



[illegible]

[illegible]

<https://www.doi.org/10.1016/j.jct.2012.02.037>  
<https://www.doi.org/10.1016/j.jct.2016.09.015>  
<https://www.doi.org/10.1016/j.jct.2013.09.041>  
<https://www.doi.org/10.1016/j.fluid.2014.09.008>  
<https://www.doi.org/10.1021/je800158z>  
<https://www.doi.org/10.1016/j.fluid.2006.03.018>  
<https://www.doi.org/10.1016/j.jct.2011.09.028>  
<https://www.doi.org/10.1021/je9008188>  
<https://www.doi.org/10.1021/acs.jced.8b00581>  
<https://www.doi.org/10.1016/j.jct.2015.12.026>  
<https://www.doi.org/10.1021/acs.jced.9b00411>  
<https://www.doi.org/10.1016/j.jct.2019.01.026>  
<https://www.doi.org/10.1016/j.jct.2011.11.007>  
<https://www.doi.org/10.1016/j.tca.2017.12.010>  
<https://www.doi.org/10.1021/acs.jced.8b00888>  
<https://www.doi.org/10.1021/je0505164>  
<https://www.doi.org/10.1016/j.jct.2015.06.019>  
<https://www.doi.org/10.1016/j.jct.2016.06.004>  
<https://www.doi.org/10.1021/je901006c>  
<https://www.doi.org/10.1016/j.fluid.2012.12.020>  
<https://www.doi.org/10.1021/je800056h>  
<https://www.doi.org/10.1021/je7002572>  
<https://www.doi.org/10.1021/je300533r>  
<https://www.doi.org/10.1021/je501045s>  
<https://www.doi.org/10.1021/acs.jced.9b00593>  
<https://www.doi.org/10.1021/je300754n>  
<https://www.doi.org/10.1021/je030131q>  
<https://www.doi.org/10.1021/je100870x>  
<https://www.doi.org/10.1021/je3013205>  
<https://www.doi.org/10.1021/je401101u>  
<https://www.doi.org/10.1016/j.jct.2005.10.022>  
<https://www.doi.org/10.1016/j.jct.2019.03.004>  
<https://www.doi.org/10.1021/acs.jced.8b01250>  
<https://www.doi.org/10.1021/acs.jced.7b00206>  
<https://www.doi.org/10.1016/j.fluid.2005.08.023>  
<https://www.doi.org/10.1021/je3001574>  
<https://www.doi.org/10.1021/je800520w>  
<https://www.doi.org/10.1016/j.fluid.2012.05.003>  
<https://www.doi.org/10.1016/j.jct.2016.10.020>  
<https://www.doi.org/10.1016/j.jct.2019.03.014>  
<https://www.doi.org/10.1021/je060133l>  
<https://www.doi.org/10.1016/j.jct.2016.05.005>  
<https://www.doi.org/10.1021/je800088e>



<https://www.doi.org/10.1016/j.fluid.2018.09.024>  
<https://www.doi.org/10.1021/je9003178>  
<https://www.doi.org/10.1021/acs.jced.9b00347>  
<https://www.doi.org/10.1021/je1003934>  
<https://www.doi.org/10.1016/j.jct.2011.03.012>  
<https://www.doi.org/10.1021/acs.jced.7b01134>  
<https://www.doi.org/10.1021/je5007949>  
<https://www.doi.org/10.1021/je500038u>  
<https://www.doi.org/10.1021/je8003244>  
**1-tetrazole**  
<https://www.doi.org/10.1016/j.fluid.2017.12.024>  
<https://www.doi.org/10.1016/j.fluid.2014.06.021>  
<https://www.doi.org/10.1016/j.fluid.2018.06.003>  
<https://www.doi.org/10.1021/je900038m>  
<https://www.doi.org/10.1016/j.fluid.2014.06.005>  
<https://www.doi.org/10.1016/j.jct.2018.12.009>  
<https://www.doi.org/10.1021/acs.jced.8b00560>  
<https://www.doi.org/10.1021/je060496l>  
<https://www.doi.org/10.1021/acs.jced.5b00870>  
<https://www.doi.org/10.1021/je100361s>  
<https://www.doi.org/10.1021/je900587b>  
<https://www.doi.org/10.1021/acs.jced.8b00192>  
<https://www.doi.org/10.1016/j.jct.2016.03.011>  
<https://www.doi.org/10.1021/je800246v>  
<https://www.doi.org/10.1016/j.jct.2013.12.002>  
<https://www.doi.org/10.1021/je050193b>  
<https://www.doi.org/10.1021/je500035r>  
<https://www.doi.org/10.1021/acs.jced.9b00490>  
<http://link.springer.com/article/10.1007/BF02311772>

<https://www.doi.org/10.1016/j.jct.2007.01.004>  
<https://www.doi.org/10.1021/acs.jced.7b00058>  
<https://www.doi.org/10.1021/je5010033>  
<https://www.doi.org/10.1021/je0500431>  
<https://www.doi.org/10.1021/acs.jced.9b00428>  
<https://www.doi.org/10.1021/je034066w>  
<https://www.doi.org/10.1016/j.jct.2008.12.014>  
<https://www.doi.org/10.1016/j.fluid.2013.10.034>  
<https://www.doi.org/10.1021/je700186v>  
<https://www.doi.org/10.1016/j.jct.2010.08.019>  
<https://www.doi.org/10.1016/j.jct.2019.04.016>  
<https://www.doi.org/10.1016/j.fluid.2006.02.023>  
<https://www.doi.org/10.1021/acs.jced.9b00406>  
<https://www.doi.org/10.1016/j.jct.2011.08.028>  
<https://www.doi.org/10.1021/je050404c>

[illegible]

<https://www.doi.org/10.1016/j.jct.2017.02.005>  
<https://www.doi.org/10.1021/je060476j>  
<https://www.doi.org/10.1016/j.jct.2018.11.028>  
<https://www.doi.org/10.1016/j.jct.2016.11.029>  
<https://www.doi.org/10.1016/j.fluid.2011.09.037>  
<https://www.doi.org/10.1016/j.jct.2018.08.028>  
<https://www.doi.org/10.1016/j.fluid.2015.12.050>  
<https://www.doi.org/10.1016/j.fluid.2014.12.034>  
<https://www.doi.org/10.1021/je300827f>  
<https://www.doi.org/10.1021/je3010535>  
<https://www.doi.org/10.1016/j.jct.2012.11.021>  
<https://www.doi.org/10.1016/j.jct.2015.02.002>  
<https://www.doi.org/10.1016/j.jct.2014.04.024>  
<https://www.doi.org/10.1021/je9008624>  
<https://www.doi.org/10.1021/je400581e>  
<https://www.doi.org/10.1016/j.jct.2016.06.001>  
<https://www.doi.org/10.1021/acs.jced.6b00019>  
<https://www.doi.org/10.1016/j.jct.2018.11.021>  
<https://www.doi.org/10.1021/je700212q>  
<https://www.doi.org/10.1021/je8001688>  
<https://www.doi.org/10.1016/j.jct.2013.02.006>  
<https://www.doi.org/10.1016/j.jct.2013.06.007>  
<https://www.doi.org/10.1021/je300347z>  
<https://www.doi.org/10.1021/je900435t>  
<https://www.doi.org/10.1021/acs.jced.5b00542>  
<https://www.doi.org/10.1016/j.fluid.2017.10.003>  
<https://www.doi.org/10.1016/j.fluid.2012.05.027>  
<https://www.doi.org/10.1016/j.jct.2018.11.013>  
<https://www.doi.org/10.1021/acs.jced.8b00160>  
<https://www.doi.org/10.1016/j.jct.2014.12.002>  
<https://www.doi.org/10.1021/acs.jced.7b00333>  
<https://www.doi.org/10.1021/je200067e>  
<https://www.doi.org/10.1016/j.fluid.2013.11.008>  
<https://www.doi.org/10.1021/je034106w>  
<https://www.doi.org/10.1021/acs.jced.5b00216>  
<https://www.doi.org/10.1021/je4001334>  
<https://www.doi.org/10.1016/j.jct.2014.12.027>  
<https://www.doi.org/10.1021/je700724r>  
<https://www.doi.org/10.1021/je9008427>  
<https://www.doi.org/10.1021/je800022j>  
<https://www.doi.org/10.1021/acs.jced.8b01014>  
<https://www.doi.org/10.1021/acs.jced.9b00460>  
<https://www.doi.org/10.1021/je700640r>





[illegible]

<https://www.doi.org/10.1021/je700492k>

<https://www.doi.org/10.1021/acs.jced.6b00911>

<https://www.doi.org/10.1021/acs.iced.7b00846>

<https://www.doi.org/10.1016/j.ijct.2018.09.023>

<https://www.doi.org/10.1021/je900784v>

<https://www.doi.org/10.1021/je100916h>

<https://www.doi.org/10.1021/je400786n>

<https://www.doi.org/10.1021/je900772h>

<https://www.doi.org/10.1021/je800569v>

<https://www.doi.org/10.1016/j.ijct.2017.04.017>

<https://www.doi.org/10.1016/j.fluid.2008.04.010>

<https://www.doi.org/10.1016/j.fluid.2013.05.002>

<https://www.doi.org/10.1016/j.ijct.2004.08.002>

<https://www.doi.org/10.1021/acs.iced.8b01116>

<https://www.doi.org/10.1016/j.ijct.2008.10.017>

<https://www.doi.org/10.1016/j.fluid.2013.04.008>

<https://www.doi.org/10.1021/je200921u>

<https://www.doi.org/10.1016/j.ijct.2017.07.013>

<https://www.doi.org/10.1021/je2013582>

<https://www.doi.org/10.1021/acs.iced.8b00977>

<https://www.doi.org/10.1016/j.fluid.2018.03.034>

<https://www.doi.org/10.1016/j.ijet.2016.03.001>

<https://www.doi.org/10.1031/acs.jced.8b01265>

<https://www.doi.org/10.1016/j.ijct.2016.03.010>

<https://www.doi.org/10.1021/jc040378a>

<https://www.doi.org/10.1031/acs.joc.3b02952>

<https://www.doi.org/10.1016/j.jst.2019.03.018>

<https://www.doi.org/10.1016/j.ijet.2016.09.011>

<https://www.doi.org/10.1021/acs.joc.8b0055>

<https://www.doi.org/10.1021/acs.joc.2b00762>

[illegible]

https://doi.org/10.1002/1469-7580.12004

<https://doi.org/10.1016/j.joee.2020.100420>

doi:10.1371/journal.pone.0191351

http://www.tackling.org/forums/2/discussion/2001001

<http://www.industry.gov.au/1313331/1313331>

<http://www.doh.gov/Content.aspx?ContentID=1363>

<https://www.asn.org/>; <https://asn.jco.ox.ac.uk/>

<https://www.industry.gov.au/publications/2019-05-16/2019-05-16-01>

<https://www.doi.org/10.1016/j.joc.2012.05.017>

<https://www.doi.org/10.1016/j.joc.2016.11.002>

<https://www.doi.org/10.1021/jo100000n>

<https://www.doi.org/10.1021/jc004100z>

<https://www.doi.org/10.1016/j.tca.2019.06.006>



[illegible]

<https://www.doi.org/10.1016/j.fluid.2009.11.027>  
<https://www.doi.org/10.1016/j.fluid.2015.09.013>  
<https://www.doi.org/10.1016/j.fluid.2007.06.007>  
<https://www.doi.org/10.1016/j.fluid.2016.04.007>  
<https://www.doi.org/10.1021/je700118q>  
<https://www.doi.org/10.1016/j.jct.2006.03.018>  
<https://www.doi.org/10.1021/acs.jced.8b00257>  
<https://www.doi.org/10.1021/je049914h>  
<https://www.doi.org/10.1021/je800919m>  
<https://www.doi.org/10.1021/je100397q>  
<https://www.doi.org/10.1021/je400899e>  
<https://www.doi.org/10.1016/j.jct.2015.02.024>  
<https://www.doi.org/10.1021/acs.jced.9b00381>  
<https://www.doi.org/10.1016/j.jct.2014.01.030>  
<https://www.doi.org/10.1021/je100964a>  
<https://www.doi.org/10.1021/acs.jced.9b00432>  
<https://www.doi.org/10.1021/acs.jced.9b00703>  
<https://www.doi.org/10.1021/je400576e>  
<https://www.doi.org/10.1016/j.fluid.2011.03.003>  
<https://www.doi.org/10.1021/je9007348>  
<https://www.doi.org/10.1021/acs.jced.9b00445>  
<https://www.doi.org/10.1021/acs.jced.7b00669>  
<https://www.doi.org/10.1021/acs.jced.5b00607>  
<https://www.doi.org/10.1021/acs.jced.8b00126>  
<https://www.doi.org/10.1021/je301014d>  
<https://www.doi.org/10.1021/je800699f>  
<https://www.doi.org/10.1021/je700221w>  
<https://www.doi.org/10.1016/j.jct.2017.02.008>  
<https://www.doi.org/10.1016/j.tca.2017.06.023>  
<https://www.doi.org/10.1021/acs.jced.8b00292>  
<https://www.doi.org/10.1021/je100100n>  
<https://www.doi.org/10.1016/j.jct.2005.04.010>  
<https://www.doi.org/10.1021/je1001329>  
<https://www.doi.org/10.1021/je700560s>  
<https://www.doi.org/10.1016/j.fluid.2017.12.029>  
<https://www.doi.org/10.1021/acs.jced.6b00954>  
<https://www.doi.org/10.1021/je7001336>  
<https://www.doi.org/10.1016/j.jct.2005.08.011>  
<https://www.doi.org/10.1016/j.fluid.2011.09.027>  
<https://www.doi.org/10.1021/je700426k>  
<https://www.doi.org/10.1016/j.fluid.2011.10.004>  
<https://www.doi.org/10.1021/je0342116>  
<https://www.doi.org/10.1021/je300517q>

[illegible]

<https://www.doi.org/10.1016/j.fluid.2015.10.035>

<https://www.doi.org/10.1021/ie8005419>

<https://www.doi.org/10.1021/ie900704b>

<https://www.doi.org/10.1016/j.ijct.2019.02.002>

<https://www.doi.org/10.1021/ie1012857>

<https://www.doi.org/10.1021/acs.jced.6b00630>

<https://www.doi.org/10.1016/j.fluid.2009.03.011>

<https://www.doi.org/10.1021/acs.jced.8b01062>

<https://www.doi.org/10.1016/j.ijct.2016.05.003>

<https://www.doi.org/10.1021/je0502804>

<https://www.doi.org/10.1016/j.tca.2012.12.008>

<https://www.doi.org/10.1016/j.ijct.2019.03.029>

<https://www.doi.org/10.1021/acs.jced.7b00892>

<https://www.doi.org/10.1021/je4001894>

<https://www.doi.org/10.1021/acs.iced.9b00308>

<https://www.doi.org/10.1021/ie7007582>

<https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure>

<https://www.doi.org/10.1016/j.ijct.2018.10.030>

<https://www.doi.org/10.1021/ie100713s>

<https://www.doi.org/10.1016/j.ijct.2019.03.016>

<https://www.doi.org/10.1016/j.itcc.2009.13.001>

<https://www.doi.org/10.1031/jc030313c>

<https://www.doi.org/10.1016/j.fluid.2018.05.033>

<https://www.doi.org/10.1016/j.ijct.2016.11.036>

<https://www.doi.org/10.1016/j.ijet.2015.03.033>

<https://www.doi.org/10.1016/j.fluid.2007.04.022>

<https://www.doi.org/10.1016/j.jist.2011.11.005>

<https://www.doi.org/10.1016/j.fluid.2019.01.005>

<https://www.doi.org/10.1016/j.jst.2018.03.002>

<https://www.doi.org/10.1016/j.fluid.2013.03.011>

[illegible]

https://doi.org/10.1001/jama.296.12.1527

<https://doi.org/10.1016/j.jmb.2023.108000>

[illegible][illegible][illegible]

DOI: 10.1002/anie.201503333

doi:10.1371/journal.pone.0142333.g002

<https://doi.org/10.1002/for.1457>

[http://en.wikipedia.org/wiki/passscreen;file/view;/\\_](http://en.wikipedia.org/wiki/passscreen;file/view;/_)

<https://www.mashery.com/10.1016/j.mbs.2017.05.001>

<https://www.washenergy.com/press/1/jc-0000009>



[illegible]

<https://www.doi.org/10.1016/j.jct.2004.03.014>  
<https://www.doi.org/10.1016/j.jct.2019.06.019>  
<https://www.doi.org/10.1021/je500206w>  
<https://www.doi.org/10.1021/je060452c>  
<https://www.doi.org/10.1021/je800658v>  
<https://www.doi.org/10.1021/je700119m>  
<https://www.doi.org/10.1021/je700200b>  
<https://www.doi.org/10.1021/acs.jced.8b01097>  
<https://www.doi.org/10.1016/j.fluid.2015.07.023>  
<https://www.doi.org/10.1021/je900401z>  
<https://www.doi.org/10.1016/j.jct.2004.09.009>  
<https://www.doi.org/10.1016/j.jct.2016.01.017>  
<https://www.doi.org/10.1021/je700140j>  
<https://www.doi.org/10.1021/je900764f>  
<https://www.doi.org/10.1021/je700092d>  
<https://www.doi.org/10.1016/j.fluid.2012.11.003>  
<https://www.doi.org/10.1016/j.fluid.2005.05.012>  
<https://www.doi.org/10.1021/je050440b>  
<https://www.doi.org/10.1021/je500893g>  
<https://www.doi.org/10.1016/j.jct.2015.04.034>  
<https://www.doi.org/10.1021/je800334m>  
<https://www.doi.org/10.1021/je8002157>  
<https://www.doi.org/10.1021/acs.jced.8b00566>  
<https://www.doi.org/10.1021/je050175u>  
<https://www.doi.org/10.1021/acs.jced.8b00124>  
<https://www.doi.org/10.1016/j.tca.2012.05.004>  
<https://www.doi.org/10.1021/acs.jced.8b00333>  
<https://www.doi.org/10.1016/j.fluid.2016.12.012>  
<https://www.doi.org/10.1016/j.jct.2016.09.001>  
<https://www.doi.org/10.1021/je900027h>  
<https://www.doi.org/10.1021/je600526x>  
<https://www.doi.org/10.1016/j.fluid.2013.02.007>  
<https://www.doi.org/10.1021/acs.jced.9b00320>  
<https://www.doi.org/10.1021/je034172y>  
<https://www.doi.org/10.1016/j.fluid.2014.03.022>  
<https://www.doi.org/10.1021/acs.jced.8b00578>  
<https://www.doi.org/10.1021/acs.jced.9b00696>  
<https://www.doi.org/10.1021/acs.jced.9b00229>  
<https://www.doi.org/10.1021/acs.jced.7b00523>  
<https://www.doi.org/10.1016/j.fluid.2015.12.051>  
<https://www.doi.org/10.1016/j.fluid.2014.02.006>  
<https://www.doi.org/10.1021/acs.jced.6b00965>  
<https://www.doi.org/10.1016/j.fluid.2015.12.044>

[illegible]



[illegible]

<https://www.doi.org/10.1021/je800739v>

<https://www.doi.org/10.1016/j.ijct.2016.10.001>

<https://www.doi.org/10.1021/acs.iced.7b00445>

<https://www.doi.org/10.1016/j.ijct.2016.10.044>

<https://www.doi.org/10.1021/ie050072b>

<https://www.doi.org/10.1021/ie800611r>

<https://www.doi.org/10.1021/ie800446c>

[http://www.ddbst.com/en/FED/VI\\_F/VI\\_F%20Acetonitrile%3B2-Propanol.php](http://www.ddbst.com/en/FED/VI_F/VI_F%20Acetonitrile%3B2-Propanol.php)

<https://www.doi.org/10.1016/j.fluid.2009.11.007>

<https://www.doi.org/10.1016/j.ijct.2011.01.010>

<https://www.doi.org/10.1021/acs.jced.9b00362>

<https://www.doi.org/10.1021/je900059e>

<https://www.doi.org/10.1016/j.ijct.2019.01.013>

<https://www.doi.org/10.1021/acs.jced.7b00316>

<https://www.doi.org/10.1021/acs.iced.5b00617>

<https://www.doi.org/10.1021/acs.iced.8b01055>

<https://www.doi.org/10.1021/je100255z>

<https://www.doi.org/10.1021/ie7005693>

<https://www.doi.org/10.1021/acs.iced.8b00033>

<https://www.doi.org/10.1016/j.ijct.2018.07.024>

<https://www.doi.org/10.1031/acs.iced.8b01101>

<https://www.doi.org/10.1021/jo501036r>

<https://www.doi.org/10.1021/acs.jced.8b00380>

<https://www.doi.org/10.1016/j.ijct.2005.04.010>

<https://www.doi.org/10.1021/acs.jced.8b00103>

<https://www.doi.org/10.1021/acs.joc.3b00065>

<https://www.doi.org/10.1016/j.jst.2019.03.013>

<https://www.doi.org/10.1021/acs.jced.0b00212>

<https://www.doi.org/10.1016/j.jast.2017.12.010>

<https://www.doi.org/10.1021/acs.2000001>

[illegible]

[Link //](#) [Link /40-1001/-500000](#)

<https://doi.org/10.1016/j.fluid.2021.104930>

propionate], 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 84

DOI: 10.1002/for

111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-110

[illegible]

1. *Journal of the American Medical Association*, 1997; 277: 1001-1005.

<https://www.industry.gov.au/publications/industry-employment-report-2019>

<https://www.doherty.ie/for-researchers/join-us>

<https://www.dailymail.co.uk/health/article-3642111/How-often-should-you-shower.html>

<https://www.industry.gov.au/publications/2018-02-17/assessing-research>

[illegible]

<https://www.doi.org/10.1016/j.fluid.2016.01.025>

<https://www.doi.org/10.1016/j.ijct.2008.09.021>

<https://www.doi.org/10.1021/ie200637v>

<https://www.doi.org/10.1016/j.ijct.2018.08.018>

<https://www.doi.org/10.1021/je500078n>

<https://www.doi.org/10.1016/j.fluid.2018.11.011>

<https://www.doi.org/10.1016/j.ijct.2016.08.024>

<https://www.doi.org/10.1021/acs.jced.8b00551>

<https://www.doi.org/10.1016/j.ijct.2017.02.023>

<https://www.doi.org/10.1016/j.ijct.2016.08.021>

<https://www.doi.org/10.1021/acs.iced.7b00851>

<https://www.doi.org/10.1016/j.ijct.2015.05.022>

<https://www.doi.org/10.1016/j.ijct.2017.05.013>

<https://www.doi.org/10.1016/j.fluid.2015.01.009>

<https://www.doi.org/10.1021/acs.iced.8b00601>

<https://www.doi.org/10.1016/j.fluid.2018.06.013>

<https://www.doi.org/10.1021/acs.iced.9b00360>

<https://www.doi.org/10.1016/j.ijct.2010.07.005>

<https://www.doi.org/10.1016/j.fluid.2017.08.001>

<https://www.doi.org/10.1016/j.fluid.2005.03.016>

<https://www.doi.org/10.1021/ie800049b>

<https://www.doi.org/10.1021/acs.iced.8b00988>

<https://www.doi.org/10.1016/j.fluid.2010.08.006>

<https://www.doi.org/10.1021/jo900043a>

<https://www.doi.org/10.1021/acs.iced.5b00616>

<https://www.doi.org/10.1016/j.fluid.2016.03.017>

<https://www.doi.org/10.1021/jc300325f>

<https://www.doi.org/10.1021/jc050305g>

<https://www.doi.org/10.1016/j.ijet.2016.12.036>

<https://www.ohioe.org/research/kdb/beprep/beprep.php?empid=820>

<https://www.doi.org/10.1031/acs.jocd.8b01136>

<https://www.doi.org/10.1021/acs.joc.8b04186>

<https://www.doi.org/10.1021/jc060329t>

<https://www.doi.org/10.1016/j.jst.2014.06.001>

<https://www.doi.org/10.1031/acs.joc.2b00071>

<https://www.doi.org/10.1001/jama.2020.10032>

**DOI:** 10.1089/jgm.2016.007

## thylimidazolium

DOI: 10.1002/jbm.b.30697

<https://www.doi.org/10.1016/j.jcta.2019.100388>

<http://www.tandfonline.com/doi/10.1080/10439862.2014.913933>

<https://www.doi.org/10.1016/j.aes.2020.100203>

<https://www.doi.org/10.1016/j.jcta.2019.03.003>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC607120/>



[illegible]

[illegible]

<https://www.doi.org/10.1021/acs.jced.5b00360>

<https://www.doi.org/10.1021/ie050086h>

<https://www.doi.org/10.1016/j.ijct.2012.02.007>

<https://www.doi.org/10.1016/j.jct.2017.01.004>

<https://www.doi.org/10.1016/j.tca.2016.01.009>

<https://www.doi.org/10.1016/j.fluid.2007.09.014>

<https://www.doi.org/10.1021/ie700664a>

<https://www.doi.org/10.1016/j.fluid.2014.04.008>

<https://www.doi.org/10.1016/j.ijct.2011.02.018>

<https://www.doi.org/10.1016/j.ijct.2017.02.017>

<https://www.doi.org/10.1021/acs.iced.9b00331>

<https://www.doi.org/10.1016/j.ijct.2005.07.022>

<https://www.doi.org/10.1016/j.ijct.2016.10.043>

<https://www.doi.org/10.1016/j.fluid.2017.04.005>

<https://www.doi.org/10.1021/je100352r>

<https://www.doi.org/10.1016/j.ijct.2016.07.023>

<https://www.doi.org/10.1016/j.ijct.2015.11.024>

<https://www.doi.org/10.1021/ie060318s>

<https://www.doi.org/10.1021/acs.iced.9b00564>

<https://www.doi.org/10.1016/j.tsc.2010.05.012>

<https://www.doi.org/10.1016/j.fluid.2011.09.033>

<https://www.doi.org/10.1016/j.ijct.2007.03.008>

<https://www.doi.org/10.1021/acs.icsd.9b00778>

<https://www.doi.org/10.1031/jc800160a>

<https://www.doi.org/10.1021/acs.iced.7b00825>

<https://www.doi.org/10.1031/acs.jced.8b00416>

<https://www.doi.org/10.1016/j.itcc.2005.11.011>

<https://www.doi.org/10.1031/acs-iacd.9b00458>

<https://www.doi.org/10.1031/acs.jced.8b01084>

<https://www.doi.org/10.1031/acs.joc.4b00375>

<http://www.doi.org/10.1016/j.tsc.2005.08.031>

<https://www.doi.org/10.1016/j.fluid.2013.06.021>

<https://www.doi.org/10.1016/j.fluid.2015.03.022>

<https://www.doi.org/10.1021/acs.joc.2b00280>

<https://www.doi.org/10.1001/ja.2004.205>

<https://www.doi.org/10.1001/jc.1004023>

10-1001 0000000

11. // <https://doi.org/10.1016/j.jmr.2023.11.010>

11. "11-10-1994" 11-10-1994

[illegible]

11. "1991/10/10" 1991年10月10日

**Keywords:** *depression; mood disorder; anxiety disorders*

doi:10.1371/journal.pone.0142132.g002



Naphthalene Solubility in Binary Solvent Mixtures of 2-Butanone with Various Solvents at 278.15 K: Vapor Pressure and Selectivity of Separation based on activity coefficients and thermodynamic models for solution thermodynamics of binary mixtures of 2-butanone with (a) Ethanol, (b) Ethylacetate, (c) Propylacetate, (d) Toluene, (e) Methylacetate, (f) Ethylacetate, (g) Propylacetate, (h) Toluene, (i) Ethylacetate, (j) Propylacetate, (k) Toluene, (l) Ethylacetate, (m) Propylacetate, (n) Toluene, (o) Ethylacetate, (p) Propylacetate, (q) Toluene, (r) Ethylacetate, (s) Propylacetate, (t) Toluene, (u) Ethylacetate, (v) Propylacetate, (w) Toluene, (x) Ethylacetate, (y) Propylacetate, (z) Toluene, (aa) Ethylacetate, (ab) Propylacetate, (ac) Toluene, (ad) Ethylacetate, (ae) Propylacetate, (af) Toluene, (ag) Ethylacetate, (ah) Propylacetate, (ai) Toluene, (aj) Ethylacetate, (ak) Propylacetate, (al) Toluene, (am) Ethylacetate, (an) Propylacetate, (ao) Toluene, (ap) Ethylacetate, (aq) Propylacetate, (ar) Toluene, (as) Ethylacetate, (at) Propylacetate, (au) Toluene, (av) Ethylacetate, (aw) Propylacetate, (ax) Toluene, (ay) Ethylacetate, (az) Propylacetate, (ba) Toluene, (bb) Ethylacetate, (bc) Propylacetate, (bd) Toluene, (be) Ethylacetate, (bf) Propylacetate, (bg) Toluene, (bh) Ethylacetate, (bi) Propylacetate, (bj) Toluene, (bk) Ethylacetate, (bl) Propylacetate, (bm) Toluene, (bn) Ethylacetate, (bo) Propylacetate, (bp) Toluene, (bq) Ethylacetate, (br) Propylacetate, (bs) Toluene, (bt) Ethylacetate, (bu) Propylacetate, (bv) Toluene, (bw) Ethylacetate, (bx) Propylacetate, (by) Toluene, (bz) Ethylacetate, (ca) Propylacetate, (cb) Toluene, (cc) Ethylacetate, (cd) Propylacetate, (ce) Toluene, (cf) Ethylacetate, (cf) Propylacetate, (cg) Toluene, (ch) Ethylacetate, (ci) Propylacetate, (cj) Toluene, (ck) Ethylacetate, (cl) Propylacetate, (cm) Toluene, (cn) Ethylacetate, (co) Propylacetate, (cp) Toluene, (cq) Ethylacetate, (cr) Propylacetate, (cs) Toluene, (ct) Ethylacetate, (cu) Propylacetate, (cv) Toluene, (cw) Ethylacetate, (cx) Propylacetate, (cy) Toluene, (cz) Ethylacetate, (da) Propylacetate, (db) Toluene, (dc) Ethylacetate, (dd) Propylacetate, (de) Toluene, (df) Ethylacetate, (df) Propylacetate, (dg) Toluene, (dh) Ethylacetate, (di) Propylacetate, (dj) Toluene, (dk) Ethylacetate, (dl) Propylacetate, (dm) Toluene, (dn) Ethylacetate, (do) Propylacetate, (dp) Toluene, (dq) Ethylacetate, (dr) Propylacetate, (ds) Toluene, (dt) Ethylacetate, (du) Propylacetate, (dv) Toluene, (dw) Ethylacetate, (dx) Propylacetate, (dy) Toluene, (dz) Ethylacetate, (ea) Propylacetate, (eb) Toluene, (ec) Ethylacetate, (ed) Propylacetate, (ee) Toluene, (ef) Ethylacetate, (ef) Propylacetate, (eg) Toluene, (eh) Ethylacetate, (ei) Propylacetate, (ej) Toluene, (ek) Ethylacetate, (el) Propylacetate, (em) Toluene, (en) Ethylacetate, (eo) Propylacetate, (ep) Toluene, (eq) Ethylacetate, (er) Propylacetate, (es) Toluene, (et) Ethylacetate, (eu) Propylacetate, (ev) Toluene, (ew) Ethylacetate, (ex) Propylacetate, (ey) Toluene, (ez) Ethylacetate, (fa) Propylacetate, (fb) Toluene, (fc) Ethylacetate, (fd) Propylacetate, (fe) Toluene, (ff) Ethylacetate, (ff) Propylacetate, (fg) Toluene, (fh) Ethylacetate, (fi) Propylacetate, (fj) Toluene, (fk) Ethylacetate, (fl) Propylacetate, (fm) Toluene, (fn) Ethylacetate, (fo) Propylacetate, (fp) Toluene, (fq) Ethylacetate, (fr) Propylacetate, (fs) Toluene, (ft) Ethylacetate, (fu) Propylacetate, (fv) Toluene, (fw) Ethylacetate, (fx) Propylacetate, (fy) Toluene, (fz) Ethylacetate, (ga) Propylacetate, (gb) Toluene, (gc) Ethylacetate, (gd) Propylacetate, (ge) Toluene, (gf) Ethylacetate, (gf) Propylacetate, (gg) Toluene, (gh) Ethylacetate, (gi) Propylacetate, (gj) Toluene, (gk) Ethylacetate, (gl) Propylacetate, (gm) Toluene, (gn) Ethylacetate, (go) Propylacetate, (gp) Toluene, (gq) Ethylacetate, (gr) Propylacetate, (gs) Toluene, (gt) Ethylacetate, (gu) Propylacetate, (gv) Toluene, (gw) Ethylacetate, (gx) Propylacetate, (gy) Toluene, (gz) Ethylacetate, (ha) Propylacetate, (hb) Toluene, (hc) Ethylacetate, (hd) Propylacetate, (he) Toluene, (hf) Ethylacetate, (hf) Propylacetate, (hg) Toluene, (hh) Ethylacetate, (hi) Propylacetate, (hj) Toluene, (hk) Ethylacetate, (hl) Propylacetate, (hm) Toluene, (hn) Ethylacetate, (ho) Propylacetate, (hp) Toluene, (hq) Ethylacetate, (hr) Propylacetate, (hs) Toluene, (ht) Ethylacetate, (hu) Propylacetate, (hv) Toluene, (hw) Ethylacetate, (hx) Propylacetate, (hy) Toluene, (hz) Ethylacetate, (ia) Propylacetate, (ib) Toluene, (ic) Ethylacetate, (id) Propylacetate, (ie) Toluene, (if) Ethylacetate, (if) Propylacetate, (ig) Toluene, (ih) Ethylacetate, (ii) Propylacetate, (ij) Toluene, (ik) Ethylacetate, (il) Propylacetate, (im) Toluene, (in) Ethylacetate, (io) Propylacetate, (ip) Toluene, (iq) Ethylacetate, (ir) Propylacetate, (is) Toluene, (it) Ethylacetate, (iu) Propylacetate, (iv) Toluene, (iw) Ethylacetate, (ix) Propylacetate, (iy) Toluene, (iz) Ethylacetate, (ja) Propylacetate, (jb) Toluene, (jc) Ethylacetate, (jd) Propylacetate, (je) Toluene, (jf) Ethylacetate, (jf) Propylacetate, (jg) Toluene, (jh) Ethylacetate, (ji) Propylacetate, (jj) Toluene, (jk) Ethylacetate, (jl) Propylacetate, (jm) Toluene, (jn) Ethylacetate, (jo) Propylacetate, (jp) Toluene, (jq) Ethylacetate, (jr) Propylacetate, (js) Toluene, (jt) Ethylacetate, (ju) Propylacetate, (jv) Toluene, (jw) Ethylacetate, (jx) Propylacetate, (jy) Toluene, (jz) Ethylacetate, (ka) Propylacetate, (kb) Toluene, (kc) Ethylacetate, (kd) Propylacetate, (ke) Toluene, (kf) Ethylacetate, (kf) Propylacetate, (kg) Toluene, (kh) Ethylacetate, (ki) Propylacetate, (kj) Toluene, (kk) Ethylacetate, (kl) Propylacetate, (km) Toluene, (kn) Ethylacetate, (ko) Propylacetate, (kp) Toluene, (kq) Ethylacetate, (kr) Propylacetate, (ks) Toluene, (kt) Ethylacetate, (ku) Propylacetate, (kv) Toluene, (kw) Ethylacetate, (kx) Propylacetate, (ky) Toluene, (kz) Ethylacetate, (la) Propylacetate, (lb) Toluene, (lc) Ethylacetate, (ld) Propylacetate, (le) Toluene, (lf) Ethylacetate, (lf) Propylacetate, (lg) Toluene, (lh) Ethylacetate, (li) Propylacetate, (lj) Toluene, (lk) Ethylacetate, (ll) Propylacetate, (lm) Toluene, (ln) Ethylacetate, (lo) Propylacetate, (lp) Toluene, (lq) Ethylacetate, (lr) Propylacetate, (ls) Toluene, (lt) Ethylacetate, (lu) Propylacetate, (lv) Toluene, (lw) Ethylacetate, (lx) Propylacetate, (ly) Toluene, (lz) Ethylacetate, (ma) Propylacetate, (mb) Toluene, (mc) Ethylacetate, (md) Propylacetate, (me) Toluene, (mf) Ethylacetate, (mf) Propylacetate, (mg) Toluene, (mh) Ethylacetate, (mi) Propylacetate, (mj) Toluene, (mk) Ethylacetate, (ml) Propylacetate, (mm) Toluene, (mn) Ethylacetate, (mo) Propylacetate, (mp) Toluene, (mq) Ethylacetate, (mr) Propylacetate, (ms) Toluene, (mt) Ethylacetate, (mu) Propylacetate, (mv) Toluene, (mw) Ethylacetate, (mx) Propylacetate, (my) Toluene, (mz) Ethylacetate, (na) Propylacetate, (nb) Toluene, (nc) Ethylacetate, (nd) Propylacetate, (ne) Toluene, (nf) Ethylacetate, (nf) Propylacetate, (ng) Toluene, (nh) Ethylacetate, (ni) Propylacetate, (nj) Toluene, (nk) Ethylacetate, (nl) Propylacetate, (nm) Toluene, (nn) Ethylacetate, (no) Propylacetate, (np) Toluene, (nq) Ethylacetate, (nr) Propylacetate, (ns) Toluene, (nt) Ethylacetate, (nu) Propylacetate, (nv) Toluene, (nw) Ethylacetate, (nx) Propylacetate, (ny) Toluene, (nz) Ethylacetate, (oa) Propylacetate, (ob) Toluene, (oc) Ethylacetate, (od) Propylacetate, (oe) Toluene, (of) Ethylacetate, (of) Propylacetate, (og) Toluene, (oh) Ethylacetate, (oi) Propylacetate, (oj) Toluene, (ok) Ethylacetate, (ol) Propylacetate, (om) Toluene, (on) Ethylacetate, (oo) Propylacetate, (op) Toluene, (oq) Ethylacetate, (or) Propylacetate, (os) Toluene, (ot) Ethylacetate, (ou) Propylacetate, (ov) Toluene, (ow) Ethylacetate, (ox) Propylacetate, (oy) Toluene, (oz) Ethylacetate, (pa) Propylacetate, (pb) Toluene, (pc) Ethylacetate, (pd) Propylacetate, (pe) Toluene, (pf) Ethylacetate, (pf) Propylacetate, (pg) Toluene, (ph) Ethylacetate, (pi) Propylacetate, (pj) Toluene, (pk) Ethylacetate, (pl) Propylacetate, (pm) Toluene, (pn) Ethylacetate, (po) Propylacetate, (pp) Toluene, (pq) Ethylacetate, (pr) Propylacetate, (ps) Toluene, (pt) Ethylacetate, (pu) Propylacetate, (pv) Toluene, (pw) Ethylacetate, (px) Propylacetate, (py) Toluene, (pz) Ethylacetate, (qa) Propylacetate, (qb) Toluene, (qc) Ethylacetate, (qd) Propylacetate, (qe) Toluene, (qf) Ethylacetate, (qf) Propylacetate, (qg) Toluene, (qh) Ethylacetate, (qi) Propylacetate, (qj) Toluene, (qk) Ethylacetate, (ql) Propylacetate, (qm) Toluene, (qn) Ethylacetate, (qo) Propylacetate, (qp) Toluene, (qq) Ethylacetate, (qr) Propylacetate, (qs) Toluene, (qt) Ethylacetate, (qu) Propylacetate, (qv) Toluene, (qw) Ethylacetate, (qx) Propylacetate, (qy) Toluene, (qz) Ethylacetate, (ra) Propylacetate, (rb) Toluene, (rc) Ethylacetate, (rd) Propylacetate, (re) Toluene, (rf) Ethylacetate, (rf) Propylacetate, (rg) Toluene, (rh) Ethylacetate, (ri) Propylacetate, (rj) Toluene, (rk) Ethylacetate, (rl) Propylacetate, (rm) Toluene, (rn) Ethylacetate, (ro) Propylacetate, (rp) Toluene, (rq) Ethylacetate, (rr) Propylacetate, (rs) Toluene, (rt) Ethylacetate, (ru) Propylacetate, (rv) Toluene, (rw) Ethylacetate, (rx) Propylacetate, (ry) Toluene, (rz) Ethylacetate, (sa) Propylacetate, (sb) Toluene, (sc) Ethylacetate, (sd) Propylacetate, (se) Toluene, (sf) Ethylacetate, (sf) Propylacetate, (sg) Toluene, (sh) Ethylacetate, (si) Propylacetate, (sj) Toluene, (sk) Ethylacetate, (sl

<https://www.doi.org/10.1021/je7005049>  
<https://www.doi.org/10.1016/j.jct.2016.06.028>  
<https://www.doi.org/10.1016/j.jct.2015.11.007>  
<https://www.doi.org/10.1021/je049816w>  
<https://www.doi.org/10.1021/acs.jced.8b00719>  
<https://www.doi.org/10.1021/je025604s>  
<https://www.doi.org/10.1021/je700316s>  
<https://www.doi.org/10.1021/acs.jced.7b00542>  
<http://pubs.acs.org/doi/abs/10.1021/ci9903071>  
<https://www.doi.org/10.1016/j.jct.2016.06.014>  
<https://www.doi.org/10.1016/j.jct.2012.12.009>  
<https://www.doi.org/10.1021/je060033f>  
<https://www.doi.org/10.1016/j.jct.2015.07.010>  
<https://www.doi.org/10.1016/j.tca.2016.01.012>  
<https://www.doi.org/10.1021/acs.jced.5b00823>  
<https://www.doi.org/10.1016/j.fluid.2008.06.004>  
<https://www.doi.org/10.1016/j.jct.2014.07.011>  
<https://www.doi.org/10.1021/acs.jced.6b00415>  
<https://www.doi.org/10.1016/j.fluid.2014.10.028>  
<https://www.doi.org/10.1021/acs.jced.7b00948>  
<https://www.doi.org/10.1016/j.jct.2006.06.001>  
<https://www.doi.org/10.1021/je1001945>  
<https://www.doi.org/10.1016/j.fluid.2013.01.024>  
<https://www.doi.org/10.1021/acs.jced.7b00110>  
<https://www.doi.org/10.1016/j.tca.2019.178383>  
<https://www.doi.org/10.1016/j.fluid.2010.06.021>  
<https://www.doi.org/10.1021/acs.jced.5b01053>  
<https://www.doi.org/10.1021/je101020m>  
<https://www.doi.org/10.1016/j.jct.2016.12.028>  
<https://www.doi.org/10.1016/j.jct.2017.12.009>  
<https://www.doi.org/10.1016/j.fluid.2012.06.011>  
<https://www.doi.org/10.1016/j.fluid.2005.01.002>  
<https://www.doi.org/10.1021/acs.jced.8b00600>  
<https://www.doi.org/10.1016/j.jct.2018.02.014>  
<https://www.doi.org/10.1021/acs.jced.8b00362>  
<https://www.doi.org/10.1016/j.jct.2014.07.019>  
<https://www.doi.org/10.1021/je7005743>  
<https://www.doi.org/10.1021/je700347h>  
<https://www.doi.org/10.1021/acs.jced.8b00717>  
<https://www.doi.org/10.1016/j.jct.2019.03.023>  
<https://www.doi.org/10.1016/j.tca.2012.10.023>  
<https://www.doi.org/10.1021/acs.jced.8b00931>  
<https://www.doi.org/10.1016/j.jct.2007.04.006>

[illegible]

<https://www.doi.org/10.1021/je0502748>  
<https://www.doi.org/10.1021/acs.jced.5b00122>  
<https://www.doi.org/10.1021/je050145r>  
<https://www.doi.org/10.1016/j.jct.2014.09.001>  
<https://www.doi.org/10.1016/j.jct.2016.10.029>  
<https://www.doi.org/10.1021/acs.jced.9b00659>  
<https://www.doi.org/10.1016/j.jct.2019.04.001>  
<https://www.doi.org/10.1021/acs.jced.5b00714>  
<https://www.doi.org/10.1021/acs.jced.7b00026>  
<https://www.doi.org/10.1021/je800571y>  
<https://www.doi.org/10.1016/j.jct.2006.10.016>  
<https://www.doi.org/10.1007/s10765-018-2361-8>  
<https://www.doi.org/10.1016/j.jct.2018.09.003>  
<https://www.doi.org/10.1021/je501174y>  
<https://www.doi.org/10.1016/j.fluid.2007.02.028>  
<https://www.doi.org/10.1007/s10765-007-0204-0>  
<https://www.doi.org/10.1021/acs.jced.8b01044>  
<https://www.doi.org/10.1021/acs.jced.5b00803>  
<https://www.doi.org/10.1016/j.jct.2019.06.007>  
<https://www.doi.org/10.1016/j.jct.2013.05.040>  
<https://www.doi.org/10.1021/acs.jced.9b00172>  
<https://www.doi.org/10.1016/j.jct.2017.03.004>  
<https://www.doi.org/10.1016/j.jct.2017.01.006>  
<https://www.doi.org/10.1016/j.fluid.2014.01.018>  
<https://www.doi.org/10.1021/je300733a>  
<https://www.doi.org/10.1021/je900021g>  
<https://www.doi.org/10.1016/j.jct.2017.05.044>  
<https://www.doi.org/10.1016/j.jct.2019.02.027>  
<https://www.doi.org/10.1016/j.fluid.2016.10.021>  
<https://www.doi.org/10.1016/j.fluid.2006.12.012>  
<https://www.doi.org/10.1021/acs.jced.8b00228>  
<https://www.doi.org/10.1016/j.jct.2013.07.004>  
<https://www.doi.org/10.1021/acs.jced.5b00377>  
<https://www.doi.org/10.1016/j.jct.2013.01.032>  
<https://www.doi.org/10.1016/j.fluid.2018.04.012>  
<https://www.doi.org/10.1016/j.fluid.2018.12.008>  
<https://www.doi.org/10.1021/acs.jced.6b00219>  
<https://www.doi.org/10.1016/j.jct.2005.12.010>  
<https://www.doi.org/10.1016/j.jct.2016.10.022>  
<https://www.doi.org/10.1016/j.fluid.2016.08.011>  
<https://www.doi.org/10.1016/j.fluid.2013.08.007>  
<https://www.doi.org/10.1016/j.jct.2013.08.030>  
<https://www.doi.org/10.1021/je800506q>



[illegible]

<https://www.doi.org/10.1021/acs.jced.9b00844>  
<https://www.doi.org/10.1021/acs.jced.6b00929>  
<https://www.doi.org/10.1016/j.jct.2016.01.003>  
<https://www.doi.org/10.1016/j.fluid.2017.09.010>  
<https://www.doi.org/10.1021/je500255d>  
<https://www.doi.org/10.1016/j.fluid.2014.05.003>  
<https://www.doi.org/10.1016/j.fluid.2007.02.020>  
<https://www.doi.org/10.1016/j.jct.2012.01.019>  
<https://www.doi.org/10.1021/acs.jced.8b00235>  
<https://www.doi.org/10.1021/je800824h>  
<https://www.doi.org/10.1021/acs.jced.5b00200>  
<https://www.doi.org/10.1021/je100624p>  
<https://www.doi.org/10.1021/je100261w>  
<https://www.doi.org/10.1016/j.fluid.2011.03.017>  
<https://www.doi.org/10.1016/j.jct.2012.08.016>  
<https://www.doi.org/10.1021/je4009816>  
**phosphabicyclo[2.2.2]octane**  
<https://www.doi.org/10.1016/j.jct.2012.01.002>  
<https://www.doi.org/10.1016/j.jct.2018.11.026>  
<https://www.doi.org/10.1021/je900504e>  
<https://www.doi.org/10.1016/j.jct.2016.01.023>  
<https://www.doi.org/10.1016/j.jct.2012.08.030>  
<https://www.doi.org/10.1021/acs.jced.7b00743>  
<https://www.doi.org/10.1021/acs.jced.8b01209>  
<https://www.doi.org/10.1021/je030238d>  
<https://www.doi.org/10.1016/j.jct.2015.02.023>  
<https://www.doi.org/10.1021/acs.jced.8b01193>  
<https://www.doi.org/10.1021/je200030k>  
<https://www.doi.org/10.1016/j.jct.2007.10.006>  
<https://www.doi.org/10.1016/j.tca.2012.09.009>  
<https://www.doi.org/10.1016/j.fluid.2007.04.016>  
<https://www.doi.org/10.1016/j.fluid.2017.06.001>  
<https://www.doi.org/10.1021/je8005979>  
<https://www.doi.org/10.1021/je400709f>  
<https://www.doi.org/10.1021/acs.jced.6b00349>  
**3,3]**  
<https://www.doi.org/10.1016/j.fluid.2018.05.005>  
<https://www.doi.org/10.1021/je200646r>  
<https://www.doi.org/10.1021/acs.jced.8b00902>

## Legend

af: Acentric Factor

<b>affp:</b>	Proton affinity
<b>aiqt:</b>	Autoignition Temperature
<b>basg:</b>	Gas basicity
<b>chl:</b>	Standard liquid enthalpy of combustion
<b>cpg:</b>	Ideal gas heat capacity
<b>cpl:</b>	Liquid phase heat capacity
<b>dm:</b>	Dipole Moment
<b>dvisc:</b>	Dynamic viscosity
<b>econd:</b>	Electrical conductivity
<b>fl:</b>	Lower Flammability Limit
<b>flu:</b>	Upper Flammability Limit
<b>fpc:</b>	Flash Point (Closed Cup Method)
<b>fpo:</b>	Flash Point (Open Cup Method)
<b>gf:</b>	Standard Gibbs free energy of formation
<b>gyrad:</b>	Radius of Gyration
<b>hf:</b>	Enthalpy of formation at standard conditions
<b>hfl:</b>	Liquid phase enthalpy of formation at standard conditions
<b>hfus:</b>	Enthalpy of fusion at standard conditions
<b>hfust:</b>	Enthalpy of fusion at a given temperature
<b>hvap:</b>	Enthalpy of vaporization at standard conditions
<b>hvapt:</b>	Enthalpy of vaporization at a given temperature
<b>ie:</b>	Ionization energy
<b>log10ws:</b>	Log10 of Water solubility in mol/l
<b>logp:</b>	Octanol/Water partition coefficient
<b>mcvol:</b>	McGowan's characteristic volume
<b>nfpaf:</b>	NFPA Fire Rating
<b>nfpah:</b>	NFPA Health Rating
<b>pc:</b>	Critical Pressure
<b>pvap:</b>	Vapor pressure
<b>rfl:</b>	Refractive Index
<b>rhoc:</b>	Critical density
<b>rho:</b>	Liquid Density
<b>rinpol:</b>	Non-polar retention indices
<b>ripol:</b>	Polar retention indices
<b>sfust:</b>	Entropy of fusion at a given temperature
<b>sl:</b>	Liquid phase molar entropy at standard conditions
<b>speedsl:</b>	Speed of sound in fluid
<b>srf:</b>	Surface Tension
<b>tb:</b>	Normal Boiling Point Temperature
<b>tbp:</b>	Boiling point at given pressure
<b>tc:</b>	Critical Temperature
<b>tf:</b>	Normal melting (fusion) point
<b>tt:</b>	Triple Point Temperature

<b>vc:</b>	Critical Volume
<b>volm:</b>	Molar Volume
<b>zc:</b>	Critical Compressibility
<b>zra:</b>	Rackett Parameter

Latest version available from:

<https://www.chemeo.com/cid/24-809-7/Isopropyl-Alcohol.pdf>

Generated by Cheméo on 2025-12-23 13:55:55.703111223 +0000 UTC m=+6246353.233151888.

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