Carbonic acid, dimethyl ester

Other names:	CH3OCOOCH3
	Dimethyl carbonate
	Dimethyl ester of carbonic acid
	Methyl carbonate
	Methyl carbonate ((MeO)2CO)
	UN 1161
Inchi:	InChI=1S/C3H6O3/c1-5-3(4)6-2/h1-2H3
InchiKey:	IEJIGPNLZYLLBP-UHFFFAOYSA-N
Formula:	C3H6O3
SMILES:	COC(=O)OC
Mol. weight [g/mol]:	90.08
CAS:	616-38-6

Physical Properties

Property code	Value	Unit	Source
affp	830.20	kJ/mol	NIST Webbook
basg	799.20	kJ/mol	NIST Webbook
gf	-364.54	kJ/mol	Joback Method
hf	-482.27	kJ/mol	Joback Method
hfus	7.50	kJ/mol	Joback Method
hvap	38.00 ± 0.20	kJ/mol	NIST Webbook
hvap	37.70 ± 0.20	kJ/mol	NIST Webbook
ie	11.00	eV	NIST Webbook
ie	11.20	eV	NIST Webbook
ie	11.00	eV	NIST Webbook
log10ws	-5.89e-03		Crippen Method
logp	0.399		Crippen Method
mcvol	66.440	ml/mol	McGowan Method
pc	4800.00 ± 150.00	kPa	NIST Webbook
pc	4800.00 ± 300.00	kPa	NIST Webbook
rhoc	342.30 ± 15.31	kg/m3	NIST Webbook
rhoc	357.61 ± 9.91	kg/m3	NIST Webbook
rinpol	620.00		NIST Webbook

tb	363.36	K	Measurement and Correlation of Vapor-Liquid Equilibrium for Binary Systems of Dimethyl Carbonate with Butyl Butyrate, o-Xylene, and Cyclohexanone at 101.3 kPa
tb	363.46	K	Densities and Excess Molar Properties of Dimethyl Carbonate with Alkanes (C6 to C10) and VLE of Dimethyl Carbonate with Alkanes (C9 to C10) at 101.3 kPa
tb	363.50 ± 0.50	K	NIST Webbook
tb	363.50 ± 0.50	K	NIST Webbook
tb	363.50 ± 0.50	K	NIST Webbook
tb	363.40 ± 0.40	K	NIST Webbook
tb	363.60 ± 0.30	K	NIST Webbook
tb	363.60 ± 0.40	K	NIST Webbook
tb	363.00	K	NIST Webbook
tb	363.35	K	Vapour-liquid equilibrium measurements and extractive distillation process design for separation of azeotropic mixture (dimethyl carbonate + ethanol)
tb	337.84	K	Measurement of (vapor + liquid) equilibrium for the systems {methanol + dimethyl carbonate} and {methanol + dimethyl carbonate + tetramethylammonium bicarbonate} at p = (34.43, 67.74) kPa
tb	363.70	K	NIST Webbook
tb	363.60 ± 0.10	K	NIST Webbook
tb	363.41	K	Organic Salt Effect of Tetramethylammonium Bicarbonate on Vapor-Liquid Equilibrium of the Dimehyl Carbonate + Methanol System
tb	363.25	K	Isobaric Vapor Liquid Equilibrium for Methanol + Dimethyl Carbonate + 1-Octyl-3-methylimidazolium Tetrafluoroborate
tb	363.46	K	Measurement of Isobaric Vapor - Liquid Equilibria of Dimethyl Carbonate with Acetone, 2-Butanone and 2-Pentanone at 101.3 kPa and Density and Speed of Sound at 298.15 K

tb	363.46	K	VLE of the binary systems (dimethyl carbonate with 2-propanol or 2-butanol) and (diethyl carbonate with methylcyclohexane) at 101.3 kPa
tc	557.00 ± 2.00	K	NIST Webbook
tc	557.00 ± 2.00	K	NIST Webbook
tf	278.20	K	The solid-liquid equilitbrium, excess molar volume and refractive deviation properties of binary systems containing dimethyl carbonate, anisole and phenol
tf	277.06	K	Efficient determination of crystallisation and melting points at low cooling and heating rates with novel computer controlled equipment
tf	267.55 ± 0.50	K	NIST Webbook
tf	278.16	K	Solid-Liquid Equilibria in Three Binary Mixtures Containing Diphenyl Carbonate
tf	277.57	K	Vapor Pressures and Thermophysical Properties of Dimethyl Carbonate, Diethyl Carbonate, and Dipropyl Carbonate
tf	278.16	K	Solid-liquid equilibria and the physical properties of binary systems of diphenyl carbonate, dimethyl carbonate, methyl phenyl carbonate, anisole, methanol and phenol
vc	0.245	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	146.98	J/mol×K	547.10	Joback Method
cpg	127.04	J/mol×K	426.87	Joback Method
cpg	132.12	J/mol×K	456.93	Joback Method
cpg	137.14	J/mol×K	486.99	Joback Method
cpg	121.94	J/mol×K	396.81	Joback Method
cpg	142.10	J/mol×K	517.05	Joback Method
cpg	116.81	J/mol×K	366.75	Joback Method

cpl	168.48	J/mol×K	303.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure
cpl	173.68	J/mol×K	323.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure
cpl	172.18	J/mol×K	318.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure
cpl	163.61	J/mol×K	288.15	Isobaric molar heat capacities of the ternary system dimethyl carbonate + p-xylene + n-decane
cpl	164.65	J/mol×K	298.15	Isobaric molar heat capacities of the ternary system dimethyl carbonate + p-xylene + n-decane

cpl	170.83	J/mol×K	313.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure
cpl	164.03	J/mol×K	288.15	Thermodynamic behaviour of the binary systems dimethyl carbonate + n-octane or n-nonane
cpl	165.02	J/mol×K	298.15	Thermodynamic behaviour of the binary systems dimethyl carbonate + n-octane or n-nonane
cpl	166.30	J/mol×K	308.15	Thermodynamic behaviour of the binary systems dimethyl carbonate + n-octane or n-nonane
cpl	153.20	J/mol×K	288.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure
cpl	156.10	J/mol×K	293.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure

cpl	157.90	J/mol×K	298.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure	
cpl	159.80	J/mol×K	303.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure	
cpl	161.70	J/mol×K	308.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure	
cpl	162.90	J/mol×K	313.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure	

cpl	169.72	J/mol×K	308.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure	
cpl	163.60	J/mol×K	323.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure	
cpl	163.80	J/mol×K	328.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure	
cpl	163.00	J/mol×K	318.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure	

cpl	165.51	J/mol×K	288.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure
cpl	166.07	J/mol×K	293.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure
cpl	167.10	J/mol×K	298.15	Densities, Viscosities, Refractive Indices, and Heat Capacities of Poly(ethylene glycol-ran-propylene glycol) + Esters of Carbonic Acid at (293.15 and 313.15) K and at Atmospheric Pressure
cpl	164.80	J/mol×K	333.15	Excess Molar Enthalpies, Molar Heat Capacities, Densities, Viscosities, and Refractive Indices of Dimethyl Sulfoxide + Esters of Carbonic Acid at 308.15 K and Atmospheric Pressure
cpl	165.92	J/mol×K	308.15	Isobaric molar heat capacities of the ternary system dimethyl carbonate + p-xylene + n-decane

dvisc	0.0006230	Pa×s	293.15	Dynamic viscosities of the ternary liquid mixtures (dimethyl carbonate + methanol + ethanol) and (dimethyl carbonate + methanol + hexane) at several temperatures	
dvisc	0.0004319	Pa×s	323.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0004270	Pa×s	323.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0005771	Pa×s	298.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	

dvisc	0.0006173	Pa×s	293.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0006163	Pa×s	293.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0004880	Pa×s	313.15	Dynamic viscosities of the ternary liquid mixtures (dimethyl carbonate + methanol + ethanol) and (dimethyl carbonate + methanol + hexane) at several temperatures	
dvisc	0.0005490	Pa×s	303.15	Dynamic viscosities of the ternary liquid mixtures (dimethyl carbonate + methanol + ethanol) and (dimethyl carbonate + methanol + hexane) at several temperatures	

dvisc	0.0005840	Pa×s	298.15	Dynamic viscosities of the ternary liquid mixtures (dimethyl carbonate + methanol + ethanol) and (dimethyl carbonate + methanol + hexane) at several temperatures	
dvisc	0.0003527	Pa×s	343.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0004820	Pa×s	313.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0004807	Pa×s	313.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	

dvisc	0.0005433	Pa×s	303.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0003893	Pa×s	333.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure	
dvisc	0.0006230	Pa×s	293.15	Density, Viscosity, and Speed of Sound of Dialkyl Carbonates with Cyclopentane and Methyl Cyclohexane at Several Temperatures	
dvisc	0.0005840	Pa×s	298.15	Density, Viscosity, and Speed of Sound of Dialkyl Carbonates with Cyclopentane and Methyl Cyclohexane at Several Temperatures	
dvisc	0.0005490	Pa×s	303.15	Density, Viscosity, and Speed of Sound of Dialkyl Carbonates with Cyclopentane and Methyl Cyclohexane at Several Temperatures	

dvisc	0.0005170	Pa×s	308.15	Density, Viscosity, and Speed of Sound of Dialkyl Carbonates with Cyclopentane and Methyl Cyclohexane at Several Temperatures
dvisc	0.0004880	Pa×s	313.15	Density, Viscosity, and Speed of Sound of Dialkyl Carbonates with Cyclopentane and Methyl Cyclohexane at Several Temperatures
dvisc	0.0005734	Pa×s	298.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure
dvisc	0.0005403	Pa×s	303.15	Excess Molar Volumes and Viscosities of Binary Mixtures of Dimethyl Carbonate with Chlorobenzene, Hexane, and Heptane from (293.15 to 353.15) K and at Atmospheric Pressure
hfust	11.58	kJ/mol	278.20	NIST Webbook
hvapt	36.40	kJ/mol	368.50	NIST Webbook
pvap	8.55	kPa	300.70	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates

pvap	2.30	kPa	277.96	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction	
pvap	3.12	kPa	282.06	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction	
pvap	4.02	kPa	286.15	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction	
pvap	4.86	kPa	290.25	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction	
pvap	6.31	kPa	294.35	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction	

pvap	6.98	kPa	298.15	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction
pvap	9.72	kPa	302.54	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction
pvap	11.70	kPa	306.64	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction
pvap	14.02	kPa	310.74	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction
pvap	19.82	kPa	318.15	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction

pvap	23.07	kPa	323.15	Low pressure methane solubility in lithium-ion batteries based solvents and electrolytes as a function of temperature. Measurement and prediction
pvap	101.30	kPa	363.35	Vapour-liquid equilibrium measurements and extractive distillation process design for separation of azeotropic mixture (dimethyl carbonate + ethanol)
pvap	101.30	kPa	363.36	Measurement and Correlation of Vapor-Liquid Equilibrium for Binary Systems of Dimethyl Carbonate with Butyl Butyrate, o-Xylene, and Cyclohexanone at 101.3 kPa
pvap	101.32	kPa	363.25	Isobaric Vapor Liquid Equilibrium for Methanol + Dimethyl Carbonate + 1-Octyl-3-methylimidazolium Tetrafluoroborate
pvap	101.32	kPa	363.41	Organic Salt Effect of Tetramethylammonium Bicarbonate on Vapor-Liquid Equilibrium of the Dimehyl Carbonate + Methanol System
pvap	9.98	kPa	304.10	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates

pvap	20.00	kPa	313.00	Vapor-Liquid Equilibrium Data of the Binary Systems in Oxidative Carbonylation of Dimethyl Ether Synthesizing Dimethyl Carbonate	
pvap	70.00	kPa	353.00	Vapor-Liquid Equilibrium Data of the Binary Systems in Oxidative Carbonylation of Dimethyl Ether Synthesizing Dimethyl Carbonate	
pvap	140.00	kPa	373.00	Vapor-Liquid Equilibrium Data of the Binary Systems in Oxidative Carbonylation of Dimethyl Ether Synthesizing Dimethyl Carbonate	
pvap	7.57	kPa	298.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates	
pvap	6.72	kPa	295.70	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates	
pvap	5.71	kPa	293.10	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates	
pvap	4.98	kPa	290.80	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates	
pvap	4.42	kPa	288.20	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates	
pvap	3.27	kPa	283.20	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates	

pvap	2.84	kPa	280.70	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	2.43	kPa	277.90	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	2.28	kPa	276.90	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	2.14	kPa	276.00	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	1.98	kPa	275.00	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	1.92	kPa	274.20	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	566.47	kPa	428.15	Measurements of isothermal vapor-liquid equilibrium of binary methanol/dimethyl carbonate system under pressure
pvap	382.50	kPa	411.15	Measurements of isothermal vapor-liquid equilibrium of binary methanol/dimethyl carbonate system under pressure
pvap	229.39	kPa	391.15	Measurements of isothermal vapor-liquid equilibrium of binary methanol/dimethyl carbonate system under pressure

pvap	154.63	kPa	377.15	Measurements of isothermal vapor-liquid equilibrium of binary methanol/dimethyl carbonate system under pressure
pvap	41.02	kPa	337.35	Measurements of isothermal vapor-liquid equilibrium of binary methanol/dimethyl carbonate system under pressure
pvap	9.68	kPa	303.20	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	3.85	kPa	285.80	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	10.00	kPa	293.00	Vapor-Liquid Equilibrium Data of the Binary Systems in Oxidative Carbonylation of Dimethyl Ether Synthesizing Dimethyl Carbonate
rfi	1.36654		298.15	Isothermal vapor liquid equilibrium at 333.15K and excess molar volumes and refractive indices at 298.15K for the mixtures of di-methyl carbonate, ethanol and 2,2,4-trimethylpentane
rfi	1.36720		298.15	Liquid liquid equlibria of the system dimethyl carbonate + methanol +water at different temperatures

rfi	1.36647	298.15	Isothermal Vapor-Liquid Equilibrium Data at T = 333.15 K and Excess Molar Volumes and Refractive Indices at T = 298.15 K for the Dimethyl Carbonate + Methanol and Isopropanol + Water with Ionic Liquids
rfi	1.36600	298.15	Viscosities, Ultrasonic Velocities at (288.15 and 298.15) K, and Refractive Indices at (298.15) K of Binary Mixtures of 2,4,6-Trimethyl-1,3,5-trioxane with Dimethyl Carbonate, Diethyl Carbonate, and Propylene Carbonate
rfi	1.35370	298.15	Bubble Temperatures of the Binary Mixtures of Dimethylcarbonate with Some Alcohols at 95.8 kPa
rfi	1.36640	298.15	Isobaric Vapor-Liquid Equilibria of Binary Mixtures of Diethyl Carbonate with Methyl Acetate, n-Propyl Acetate, or Amyl Acetate at 100.17 kPa
rfi	1.36640	298.15	Vapor-Liquid Equilibrium Data for Binary Mixtures of Dimethyl Carbonate with Methyl Acetate, Ethyl Acetate, n-Propyl Acetate, Isopropyl Acetate, n-Butyl Acetate, and Isoamyl Acetate at 93.13 kPa

rfi	1.36640		298.15	Properties of ionic liquid HMIMPF6 with carbonates, ketones and alkyl acetates	
rfi	1.36654		298.15	Isothermal vapor-liquid equilibrium at T = 333.15 K and excess volumes and molar refractivity deviation at T = 298.15 K for the ternary mixtures {di-methyl carbonate (DMC) + ethanol + benzene} and {DMC+ ethanol + toluene}	
rhol	1050.01	kg/m3	308.15	Permittivity and density of binary systems of {dimethyl or diethyl carbonate} + n-dodecane from T=(288.15 to 328.15) K	
rhol	1061.90	kg/m3	298.20	Liquid Phase Equilibria of the Water + Acetic Acid + Dimethyl Carbonate Ternary System at Several Temperatures	
rhol	1063.40	kg/m3	298.15	Vapor pressures and flash points for binary mixtures of tricyclo [5.2.1.0^(2.6)] decane and dimethyl carbonate	
rhol	1063.26	kg/m3	298.15	Isobaric vapor-liquid equilibrium at 101.3 kPa and excess properties at 298.15 K for binary mixtures of methyl phenyl carbonate with methanol or dimethyl carbonate	

rhol	1063.26	kg/m3	298.15	Ternary liquid-liquid equilibria and binary excess and deviation properties at constant temperature for mixtures of dimethyl carbonate, anisole, methanol, phenol and water
rhol	1063.30	kg/m3	298.15	Isobaric vapor-liquid equilibria for binary mixtures from methyl methanoate, dimethoxymethane and dimethyl carbonate at 101.33 kPa
rhol	1060.87	kg/m3	298.15	Solid-liquid equilibria and thermo-physical properties of liquid electrolyte systems for lithium ion batteries
rhol	1063.26	kg/m3	298.15	Solid-liquid equilibria for selected binary systems containing diphenyl carbonate
rhol	1063.24	kg/m3	298.15	Isothermal vapor-liquid equilibria at 383.15-413.15 K for the binary system methanol + dimethyl carbonate and the pressure dependency of the azeotropic point
rhol	1076.43	kg/m3	288.15	Permittivity and density of binary systems of {dimethyl or diethyl carbonate} + n-dodecane from T=(288.15 to 328.15) K

rhol	1069.95	kg/m3	293.15	Permittivity and density of binary systems of {dimethyl or diethyl carbonate} + n-dodecane from T=(288.15 to 328.15) K	
rhol	1063.26	kg/m3	298.15	Permittivity and density of binary systems of {dimethyl or diethyl carbonate} + n-dodecane from T=(288.15 to 328.15) K	
rhol	1056.61	kg/m3	303.15	Permittivity and density of binary systems of {dimethyl or diethyl carbonate} + n-dodecane from T=(288.15 to 328.15) K	
rhol	1063.26	kg/m3	298.15	Liquid Liquid Equilibria for Ternary Mixtures of Methylphenyl Carbonate, Dimethyl Carbonate, Diphenyl Carbonate, Anisole, Methanol, Phenol, and Water at Several Temperatures	
rhol	1036.65	kg/m3	318.15	Permittivity and density of binary systems of {dimethyl or diethyl carbonate} + n-dodecane from T=(288.15 to 328.15) K	
rhol	1022.92	kg/m3	328.15	Permittivity and density of binary systems of {dimethyl or diethyl carbonate} + n-dodecane from T=(288.15 to 328.15) K	

rhol	1069.79	kg/m3	293.15	Density, excess volume, and excess coefficient of thermal expansion of the binary systems of dimethyl carbonate with butyl methacrylate, allyl methacrylate, styrene, and vinyl acetate at T = (293.15, 303.15, and 313.15) K	
rhol	1056.75	kg/m3	303.15	Density, excess volume, and excess coefficient of thermal expansion of the binary systems of dimethyl carbonate with butyl methacrylate, allyl methacrylate, styrene, and vinyl acetate at T = (293.15, 303.15, and 313.15) K	
rhol	1043.37	kg/m3	313.15	Density, excess volume, and excess coefficient of thermal expansion of the binary systems of dimethyl carbonate with butyl methacrylate, allyl methacrylate, styrene, and vinyl acetate at T = (293.15, 303.15, and 313.15) K	
rhol	1070.00	kg/m3	298.15	Low pressure carbon dioxide solubility in lithium-ion batteries based electrolytes as a function of temperature. Measurement and prediction	

rhol	1056.80	kg/m3	303.15	Investigation of solute-solvent interactions in {1-butyl-3-methyl imidazoliumBis(trifluoromethylsulfonyl)imide + dimethylcarbonate} mixture using physicochemical properties
rhol	1050.20	kg/m3	308.15	Investigation of solute-solvent interactions in {1-butyl-3-methyl imidazoliumBis(trifluoromethylsulfonyl)imide + dimethylcarbonate} mixture using physicochemical properties
rhol	1043.50	kg/m3	313.15	Investigation of solute-solvent interactions in {1-butyl-3-methyl imidazoliumBis(trifluoromethylsulfonyl)imide + dimethylcarbonate} mixture using physicochemical properties
rhol	1036.80	kg/m3	318.15	Investigation of solute-solvent interactions in {1-butyl-3-methyl imidazoliumBis(trifluoromethylsulfonyl)imide + dimethylcarbonate} mixture using physicochemical properties
rhol	1030.00	kg/m3	323.15	Investigation of solute-solvent interactions in {1-butyl-3-methyl imidazoliumBis(trifluoromethylsulfonyl)imide + dimethylcarbonate} mixture using physicochemical properties
rhol	1069.83	kg/m3	293.15	Volumetric properties of binary mixtures of ionic liquid with tributyl phosphate and dimethyl carbonate

rhol	1063.25	kg/m3	298.15	Volumetric properties of binary mixtures of ionic liquid with tributyl phosphate and dimethyl carbonate	
rhol	1056.63	kg/m3	303.15	Volumetric properties of binary mixtures of ionic liquid with tributyl phosphate and dimethyl carbonate	
rhol	1050.08	kg/m3	308.15	Volumetric properties of binary mixtures of ionic liquid with tributyl phosphate and dimethyl carbonate	
rhol	1043.44	kg/m3	313.15	Volumetric properties of binary mixtures of ionic liquid with tributyl phosphate and dimethyl carbonate	
rhol	1036.62	kg/m3	318.15	Volumetric properties of binary mixtures of ionic liquid with tributyl phosphate and dimethyl carbonate	
rhol	1029.88	kg/m3	323.15	Volumetric properties of binary mixtures of ionic liquid with tributyl phosphate and dimethyl carbonate	
rhol	1069.70	kg/m3	293.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate	

rhol	1063.10	kg/m3	298.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate
rhol	1056.40	kg/m3	303.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate
rhol	1049.70	kg/m3	308.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate
rhol	1043.10	kg/m3	313.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate
rhol	1036.40	kg/m3	318.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate
rhol	1029.60	kg/m3	323.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate
rhol	1022.80	kg/m3	328.15	Density and viscosity of four binary mixtures of [C2mmim][NTf2]/[C4mmim][NTf2] + dimethyl carbonate/diethyl carbonate

rhol	1069.60	kg/m3	293.15	Densities, Viscosities, and Refractive Indices of Dimethyl Carbonate + 1-Hexanol/1-Octanol Binary Mixtures at Different Temperatures
rhol	1062.80	kg/m3	298.15	Densities, Viscosities, and Refractive Indices of Dimethyl Carbonate + 1-Hexanol/1-Octanol Binary Mixtures at Different Temperatures
rhol	1056.20	kg/m3	303.15	Densities, Viscosities, and Refractive Indices of Dimethyl Carbonate + 1-Hexanol/1-Octanol Binary Mixtures at Different Temperatures
rhol	1049.80	kg/m3	308.15	Densities, Viscosities, and Refractive Indices of Dimethyl Carbonate + 1-Hexanol/1-Octanol Binary Mixtures at Different Temperatures
rhol	1042.50	kg/m3	313.15	Densities, Viscosities, and Refractive Indices of Dimethyl Carbonate + 1-Hexanol/1-Octanol Binary Mixtures at Different Temperatures
rhol	1035.60	kg/m3	318.15	Densities, Viscosities, and Refractive Indices of Dimethyl Carbonate + 1-Hexanol/1-Octanol Binary Mixtures at Different Temperatures

rhol	1028.40	kg/m3	323.15	Densities, Viscosities, and Refractive Indices of Dimethyl Carbonate + 1-Hexanol/1-Octanol Binary Mixtures at Different Temperatures
rhol	1063.29	kg/m3	298.15	Separation Effects of Renewable Solvent Ethyl Lactate on the Vapor Liquid Equilibria of the Methanol + Dimethyl Carbonate Azeotropic System
rhol	1076.39	kg/m3	288.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1069.86	kg/m3	293.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1063.27	kg/m3	298.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1056.65	kg/m3	303.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1050.00	kg/m3	308.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1043.29	kg/m3	313.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC

rhol	1036.57	kg/m3	318.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1029.83	kg/m3	323.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1023.03	kg/m3	328.15	Excess Molar Volume and Viscosity Deviation of [C2mim][NTf2]/[C4mim][NTf2] + DMC/DEC
rhol	1063.10	kg/m3	298.15	Excess Molar Entalpies of Dimethyl Carbonate with o-Xylene, m-Xylene, p-Xylene, Ethylbenzene, or Ethyl Benzoate at 298.15 K
rhol	1063.50	kg/m3	298.15	Viscosities of Dimethyl Carbonate or Diethyl Carbonate with Alkanes at Four Temperatures. New UNIFAC-VISCO Parameters
rhol	1063.10	kg/m3	298.15	Excess Molar Enthalpies for Dimethyl Carbonate with o-Xylene, m-Xylene, p-Xylene, Ethylbenzene or Ethyl Benzoate at 298.15 K and 10.2 MPa
rhol	1043.19	kg/m3	313.15	Densities, Viscosities, and Refractive Indices of New Mixtures of Poly(ethylene glycols) + Dialkyl Carbonates at 313.15 K

rhol	1063.35	kg/m3	298.15	Excess Properties of Binary Mixtures of Esters of Carbonic Acid + Three Aryl Alcohols at 308.15 K
rhol	1063.38	kg/m3	298.15	Ebulliometric Determination of Vapor-Liquid Equilibria for Methanol + Ethanol + Dimethyl Carbonate
rhol	1062.97	kg/m3	298.15	Densities and Surface Tensions of Trimethylbenzene + Dimethyl Carbonate or + Diethyl Carbonate at 298.15 K and 313.15 K
rhol	1044.63	kg/m3	313.15	Densities and Surface Tensions of Trimethylbenzene + Dimethyl Carbonate or + Diethyl Carbonate at 298.15 K and 313.15 K
rhol	1063.19	kg/m3	298.15	Measurement and Correlation of Vapor-Liquid Equilibria at T) 333.15 K and Excess Molar Volumes at T) 298.15 K for Ethanol + Dimethyl Carbonate (DMC), DMC + 1-Propanol, and DMC + 1-Butanol

rhol	1069.80	kg/m3	293.15	Densities, Excess Molar Volumes, Isothermal Compressibilities, and Isobaric Expansivities of Dimethyl Carbonate + Cyclohexane Systems at Temperatures from (293.15 to 313.15) K and Pressures from (0.1 to 40) MPa	
rhol	1063.20	kg/m3	298.15	Densities, Excess Molar Volumes, Isothermal Compressibilities, and Isobaric Expansivities of Dimethyl Carbonate + Cyclohexane Systems at Temperatures from (293.15 to 313.15) K and Pressures from (0.1 to 40) MPa	
rhol	1056.50	kg/m3	303.15	Densities, Excess Molar Volumes, Isothermal Compressibilities, and Isobaric Expansivities of Dimethyl Carbonate + Cyclohexane Systems at Temperatures from (293.15 to 313.15) K and Pressures from (0.1 to 40) MPa	
rhol	1049.80	kg/m3	308.15	Densities, Excess Molar Volumes, Isothermal Compressibilities, and Isobaric Expansivities of Dimethyl Carbonate + Cyclohexane Systems at Temperatures from (293.15 to 313.15) K and Pressures from (0.1 to 40) MPa	

rhol	1043.00	kg/m3	313.15	Densities, Excess Molar Volumes, Isothermal Compressibilities, and Isobaric Expansivities of Dimethyl Carbonate + Cyclohexane Systems at Temperatures from (293.15 to 313.15) K and Pressures from (0.1 to 40) MPa
rhol	1069.92	kg/m3	293.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1063.34	kg/m3	298.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1056.72	kg/m3	303.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1050.07	kg/m3	308.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate

rhol	1043.39	kg/m3	313.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1036.69	kg/m3	318.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1029.94	kg/m3	323.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1023.25	kg/m3	328.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1016.32	kg/m3	333.15	Density, Excess Molar Volume and Conductivity of Binary Mixtures of the Ionic Liquid 1,2-Dimethyl-3-hexylimidazolium Bis(trifluoromethylsulfonyl)imide and Dimethyl Carbonate
rhol	1061.90	kg/m3	298.20	Liquid Phase Equilibria of Water + Formic Acid + Dimethyl Carbonate Ternary System at Several Temperatures

srf	0.03	N/m	298.15	Analysis of Surface Tension, Density, and Speed of Sound for the Ternary Mixture Dimethyl Carbonate + p-Xylene + n-Octane
srf	0.03	N/m	308.15	Surface Tension of Dialkyl Carbonates + (Alkanes or 1,4-Dimethylbenzene) and 1,4-Dimethylbenzene + Alkanes Binary Mixtures at T = 308.15 K

Datasets

Mass density, kg/m3

Temperature, K - Liquid	Pressure, kPa - Liquid	Mass density, kg/m3 - Liquid
288.15	100.00	1076.5
288.15	5000.00	1080.6
288.15	10000.00	1084.8
288.15	20000.00	1092.8
288.15	30000.00	1100.3
288.15	40000.00	1107.5
298.15	100.00	1062.9
298.15	5000.00	1068.0
298.15	10000.00	1072.1
298.15	20000.00	1080.5
298.15	30000.00	1088.5
298.15	40000.00	1095.9
308.15	100.00	1049.4
308.15	5000.00	1054.6
308.15	10000.00	1059.4
308.15	20000.00	1068.3
308.15	30000.00	1076.7
308.15	40000.00	1084.5

Reference *https://www.doi.org/10.1016/j.jct.2012.11.011*

Temperature, K	Pressure, kPa	Mass density, kg/m3
288.15	100.00	1076.83
288.15	5000.00	1081.15
288.15	10000.00	1085.32
288.15	15000.00	1089.52
288.15	20000.00	1093.35
288.15	25000.00	1096.99
288.15	30000.00	1100.63
288.15	35000.00	1104.08
288.15	40000.00	1107.4
293.15	100.00	1070.06
293.15	5000.00	1074.62
293.15	10000.00	1078.93
293.15	15000.00	1083.01
293.15	20000.00	1087.08
293.15	25000.00	1091.03
293.15	30000.00	1094.75
293.15	35000.00	1098.34
293.15	40000.00	1101.84
298.15	100.00	1063.45
298.15	5000.00	1068.0
298.15	10000.00	1072.51
298.15	15000.00	1076.72
298.15	20000.00	1080.9
298.15	25000.00	1084.89
298.15	30000.00	1088.82
298.15	35000.00	1092.44
298.15	40000.00	1096.04
303.15	100.00	1056.61
303.15	5000.00	1061.47
303.15	10000.00	1066.02
303.15	15000.00	1070.49
303.15	20000.00	1074.79
303.15	25000.00	1078.99
303.15	30000.00	1082.9
303.15	35000.00	1086.6
303.15	40000.00	1090.4
308.15	100.00	1049.91
308.15	5000.00	1054.84
308.15	10000.00	1059.69
308.15	15000.00	1064.3
308.15	20000.00	1068.73

308.15	25000.00	1073.0
308.15	30000.00	1077.1
308.15	35000.00	1080.78
308.15	40000.00	1084.38

Reference *https://www.doi.org/10.1016/j.jct.2019.02.011*

Pressure, kPa	Temperature, K	Mass density, kg/m3
100.00	283.15	1083.17
100.00	288.15	1076.43
100.00	293.15	1069.76
100.00	298.15	1063.1
100.00	303.15	1056.41
100.00	308.15	1049.66
100.00	313.15	1042.86
100.00	318.15	1036.04
100.00	323.15	1029.21
100.00	328.15	1022.24
5000.00	283.15	1087.33
5000.00	288.15	1080.8
5000.00	293.15	1074.22
5000.00	298.15	1067.7
5000.00	303.15	1061.17
5000.00	308.15	1054.59
5000.00	313.15	1047.94
5000.00	318.15	1041.3
5000.00	323.15	1034.63
5000.00	328.15	1027.92
10000.00	283.15	1091.39
10000.00	288.15	1085.02
10000.00	293.15	1078.58
10000.00	298.15	1072.21
10000.00	303.15	1065.82
10000.00	308.15	1059.39
10000.00	313.15	1052.91
10000.00	318.15	1046.44
10000.00	323.15	1039.95
10000.00	328.15	1033.45
15000.00	283.15	1095.34
15000.00	288.15	1089.07
15000.00	293.15	1082.76
15000.00	298.15	1076.52
15000.00	303.15	1070.29

15000.00	308.15	1064.0
15000.00	313.15	1057.67
15000.00	318.15	1051.36
15000.00	323.15	1045.04
15000.00	328.15	1038.69
20000.00	283.15	1099.13
20000.00	288.15	1093.0
20000.00	293.15	1086.83
20000.00	298.15	1080.7
20000.00	303.15	1074.59
20000.00	308.15	1068.43
20000.00	313.15	1062.22
20000.00	318.15	1056.08
20000.00	323.15	1049.91
20000.00	328.15	1043.71
25000.00	283.15	1102.79
25000.00	288.15	1096.79
25000.00	293.15	1090.73
25000.00	298.15	1084.74
25000.00	303.15	1078.74
25000.00	308.15	1072.65
25000.00	313.15	1066.6
25000.00	318.15	1060.6
25000.00	323.15	1054.58
25000.00	328.15	1048.53
30000.00	283.15	1106.39
30000.00	288.15	1100.48
30000.00	293.15	1094.5
30000.00	298.15	1088.62
30000.00	303.15	1082.75
30000.00	308.15	1076.8
30000.00	313.15	1070.82
30000.00	318.15	1064.95
30000.00	323.15	1059.07
30000.00	328.15	1053.14
35000.00	283.15	1109.85
35000.00	288.15	1104.03
35000.00	293.15	1098.19
35000.00	298.15	1092.39
35000.00	303.15	1086.6
35000.00	308.15	1080.78
35000.00	313.15	1074.93
35000.00	318.15	1069.15
35000.00	323.15	1063.39

35000.00	328.15	1057.57
40000.00	283.15	1113.17
40000.00	288.15	1107.5
40000.00	293.15	1101.74
40000.00	298.15	1096.04
40000.00	303.15	1090.35
40000.00	308.15	1084.63
40000.00	313.15	1078.87
40000.00	318.15	1073.21
40000.00	323.15	1067.56
40000.00	328.15	1061.87

Reference *https://www.doi.org/10.1021/je0342320*

Refractive index (Na D-line)

Pressure, kPa - Liquid	Temperature, K - Liquid	Refractive index (Na D-line) - Liquid
93.00	298.15	1.3664

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Legend

affp:	Proton affinity
basg:	Gas basicity
cpg:	Ideal gas heat capacity
cpl:	Liquid phase heat capacity
dvisc:	Dynamic viscosity
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
ie:	Ionization energy
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rfi:	Refractive Index
rhoc:	Critical density

rhol:	Liquid Density
rinpol:	Non-polar retention indices
srf:	Surface Tension
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume