Carbonic acid, dipropyl ester

Other names:	Di-n-propylcarbonate
	dipropyl carbonate
	n-C3H7O(CO)OC3H7-n
	n-Propyl carbonate
	propyl carbonate
Inchi:	InChI=1S/C7H14O3/c1-3-5-9-7(8)10-6-4-2/h3-6H2,1-2H3
InchiKey:	VUPKGFBOKBGHFZ-UHFFFAOYSA-N
Formula:	C7H14O3
SMILES:	CCCOC(=O)OCCC
Mol. weight [g/mol]:	146.18
CAS:	623-96-1

Physical Properties

Property code	Value	Unit	Source
gf	-330.86	kJ/mol	Joback Method
hf	-564.83	kJ/mol	Joback Method
hfus	17.86	kJ/mol	Joback Method
hvap	53.20 ± 0.30	kJ/mol	NIST Webbook
log10ws	-1.68		Crippen Method
logp	1.960		Crippen Method
mcvol	122.800	ml/mol	McGowan Method
pc	2887.40	kPa	Joback Method
tb	441.20	K	NIST Webbook
tc	634.29	K	Joback Method
tf	215.40	K	Vapor Pressures and Thermophysical Properties of Dimethyl Carbonate, Diethyl Carbonate, and Dipropyl Carbonate
vc	0.469	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	261.73	J/mol×K	458.27	Joback Method

cpg	272.68	J/mol×K	487.61	Joback Method
cpg	283.31	J/mol×K	516.94	Joback Method
cpg	293.62	J/mol×K	546.28	Joback Method
cpg	303.59	J/mol×K	575.61	Joback Method
cpg	313.23	J/mol×K	604.95	Joback Method
cpg	322.52	J/mol×K	634.29	Joback Method
dvisc	0.0024226	Pa×s	263.04	Joback Method
dvisc	0.0013150	Pa×s	295.58	Joback Method
dvisc	0.0008058	Pa×s	328.12	Joback Method
dvisc	0.0005394	Pa×s	360.65	Joback Method
dvisc	0.0003858	Pa×s	393.19	Joback Method
dvisc	0.0002905	Pa×s	425.73	Joback Method
dvisc	0.0002277	Pa×s	458.27	Joback Method
pvap	0.05	kPa	280.00	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.03	kPa	274.60	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.03	kPa	275.70	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.04	kPa	276.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.04	kPa	278.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.03	kPa	273.90	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.06	kPa	281.70	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.07	kPa	283.20	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates

pvap	0.07	kPa	283.40	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.08	kPa	285.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.10	kPa	288.20	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.11	kPa	290.10	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.15	kPa	293.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.17	kPa	295.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.21	kPa	298.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.25	kPa	300.70	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.30	kPa	303.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.35	kPa	305.70	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.42	kPa	308.30	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.53	kPa	312.00	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates

pvap	0.56	kPa	313.10	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.61	kPa	314.10	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.67	kPa	315.50	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
pvap	0.79	kPa	318.20	Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates
rhol	938.35	kg/m3	298.15	Solid-liquid equilibria for selected binary systems containing diphenyl carbonate

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Solid-liquid equilibria for selected binary systems containing diphenyl carbonate:	https://www.doi.org/10.1016/j.fluid.2018.09.023
Vapour pressure and enthalpy of vaporization of aliphatic dialkyl carbonates:	https://www.doi.org/10.1016/j.jct.2008.02.012
Vapor Pressures and Thermophysical Properties of Dimethyl Carbonate, Diethyl Carbonate, and Dipropyl Carbonate:	https://www.doi.org/10.1021/acs.jced.7b00295
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C623961&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

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

hvap:	Enthalpy of vaporization at standard conditions
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
rhol:	Liquid Density
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume