

Carbonic acid, dodecyl methyl ester

Other names:	Methyl dodecyl carbonate
Inchi:	InChI=1S/C14H28O3/c1-3-4-5-6-7-8-9-10-11-12-13-17-14(15)16-2/h3-13H2,1-2H3
InchiKey:	HAWBZAVPHSULBJ-UHFFFAOYSA-N
Formula:	C14H28O3
SMILES:	CCCCCCCCCCCCCOC(=O)OC
Mol. weight [g/mol]:	244.37

Physical Properties

Property code	Value	Unit	Source
gf	-271.92	kJ/mol	Joback Method
hf	-709.31	kJ/mol	Joback Method
hfus	35.99	kJ/mol	Joback Method
hvap	58.32	kJ/mol	Joback Method
log10ws	-4.61		Crippen Method
logp	4.690		Crippen Method
mcvol	221.430	ml/mol	McGowan Method
pc	1558.58	kPa	Joback Method
tb	618.43	K	Joback Method
tc	786.56	K	Joback Method
tf	341.93	K	Joback Method
vc	0.862	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	596.50	J/mol×K	618.43	Joback Method
cpg	673.19	J/mol×K	758.53	Joback Method
cpg	659.17	J/mol×K	730.51	Joback Method
cpg	644.50	J/mol×K	702.49	Joback Method
cpg	629.16	J/mol×K	674.47	Joback Method
cpg	613.16	J/mol×K	646.45	Joback Method
cpg	686.56	J/mol×K	786.56	Joback Method
dvisc	0.0001203	Pa×s	618.43	Joback Method
dvisc	0.0001585	Pa×s	572.35	Joback Method

dvisc	0.0002192	Pa×s	526.26	Joback Method
dvisc	0.0003225	Pa×s	480.18	Joback Method
dvisc	0.0005153	Pa×s	434.10	Joback Method
dvisc	0.0009201	Pa×s	388.01	Joback Method
dvisc	0.0019209	Pa×s	341.93	Joback Method

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
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=U314623&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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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