Carbonic acid, (1R)-(-)-menthyl octadecyl ester

Inchi: InChI=1S/C29H56O3/c1-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-23-31-29(30)32-2
InchiKey: FYRACOOAGKJSSO-UHFFFAOYSA-N
Formula: C29H56O3
SMILES: CCCCCCCCCCCCCCCCCCCCOC(=O)OC1CC(C(C)C)CCC1C
Mol. weight [g/mol]: 452.75

Physical Properties

Property code	Value	Unit	Source
gf	-139.03	kJ/mol	Joback Method
hf	-1010.55	kJ/mol	Joback Method
hfus	65.30	kJ/mol	Joback Method
hvap	91.14	kJ/mol	Joback Method
log10ws	-10.17		Crippen Method
logp	9.862		Crippen Method
mcvol	421.920	ml/mol	McGowan Method
pc	683.14	kPa	Joback Method
rinpol	3138.00		NIST Webbook
rinpol	3138.00		NIST Webbook
tb	971.40	K	Joback Method
tc	1192.89	K	Joback Method
tf	494.88	K	Joback Method
vc	1.627	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1522.32	J/mol×K	971.40	Joback Method
cpg	1617.21	J/mol×K	1155.97	Joback Method
cpg	1602.28	J/mol×K	1119.06	Joback Method
cpg	1585.37	J/mol×K	1082.14	Joback Method
cpg	1566.44	J/mol×K	1045.23	Joback Method
cpg	1545.44	J/mol×K	1008.31	Joback Method
cpg	1630.24	J/mol×K	1192.89	Joback Method
dvisc	0.0000242	Pa×s	971.40	Joback Method

dvisc	0.0000324	Pa×s	891.98	Joback Method
dvisc	0.0000461	Pa×s	812.56	Joback Method
dvisc	0.0000705	Pa×s	733.14	Joback Method
dvisc	0.0001198	Pa×s	653.72	Joback Method
dvisc	0.0002357	Pa×s	574.30	Joback Method
dvisc	0.0005762	Pa×s	494.88	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
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=U392446&Units=SI

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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume