Carbonic acid, decyl dodecyl ester

Inchi: InChI=1S/C23H46O3/c1-3-5-7-9-11-13-14-16-18-20-22-26-23(24)25-21-19-17-15-12-10-
InchiKey: QMUOXVDESUNOIR-UHFFFAOYSA-N
Formula: C23H46O3
SMILES: CCCCCCCCCCCCOC(=O)OCCCCCCCCCC
Mol. weight [g/mol]: 370.61

Physical Properties

Property code	Value	Unit	Source
gf	-196.14	kJ/mol	Joback Method
hf	-895.07	kJ/mol	Joback Method
hfus	59.30	kJ/mol	Joback Method
hvap	78.36	kJ/mol	Joback Method
log10ws	-8.38		Crippen Method
logp	8.201		Crippen Method
mcvol	348.240	ml/mol	McGowan Method
pc	866.58	kPa	Joback Method
rinpol	2520.00		NIST Webbook
rinpol	2520.00		NIST Webbook
tb	824.35	K	Joback Method
tc	1009.26	K	Joback Method
tf	443.36	K	Joback Method
vc	1.365	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1127.50	J/mol×K	824.35	Joback Method
cpg	1221.06	J/mol×K	978.44	Joback Method
cpg	1204.60	J/mol×K	947.63	Joback Method
cpg	1187.03	J/mol×K	916.81	Joback Method
cpg	1168.35	J/mol×K	885.99	Joback Method
cpg	1148.51	J/mol×K	855.17	Joback Method
cpg	1236.46	J/mol×K	1009.26	Joback Method
dvisc	0.0000361	Pa×s	824.35	Joback Method

dvisc	0.0000488	Pa×s	760.85	Joback Method
dvisc	0.0000696	Pa×s	697.35	Joback Method
dvisc	0.0001066	Pa×s	633.85	Joback Method
dvisc	0.0001794	Pa×s	570.36	Joback Method
dvisc	0.0003443	Pa×s	506.86	Joback Method
dvisc	0.0007960	Pa×s	443.36	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=U383161&Units=SI
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

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