Diethylene glycol, decyl ether

Other names: 2-(2-decyloxy-ethoxy)-ethanol
Inchi: InChI=1S/C14H30O3/c1-2-3-4-5-6-7-8-9-11-16-13-14-17-12-10-15/h15H,2-14H2,1H3
InchiKey: UVNSFSOKRSZVEZ-UHFFFAOYSA-N
Formula: C14H30O3
SMILES: CCCCCCCCCCOCCOCCO
Mol. weight [g/mol]: 246.39

Physical Properties

Property code	Value	Unit	Source
gf	-279.82	kJ/mol	Joback Method
hf	-748.96	kJ/mol	Joback Method
hfus	38.48	kJ/mol	Joback Method
hvap	68.26	kJ/mol	Joback Method
log10ws	-3.12		Crippen Method
logp	3.153		Crippen Method
mcvol	225.730	ml/mol	McGowan Method
pc	1594.89	kPa	Joback Method
rinpol	1864.10		NIST Webbook
tb	656.74	K	Joback Method
tc	817.27	K	Joback Method
tf	352.82	K	Joback Method
vc	0.875	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	641.91	J/mol×K	656.74	Joback Method
cpg	657.54	J/mol×K	683.49	Joback Method
cpg	672.56	J/mol×K	710.25	Joback Method
cpg	686.96	J/mol×K	737.00	Joback Method
cpg	700.76	J/mol×K	763.76	Joback Method
cpg	713.95	J/mol×K	790.51	Joback Method
cpg	726.55	J/mol×K	817.27	Joback Method
dvisc	0.0035246	Pa×s	352.82	Joback Method

dvisc	0.0009817	Pa×s	403.47	Joback Method
dvisc	0.0003636	Pa×s	454.13	Joback Method
dvisc	0.0001644	Pa×s	504.78	Joback Method
dvisc	0.0000859	Pa×s	555.43	Joback Method
dvisc	0.0000500	Pa×s	606.09	Joback Method
dvisc	0.0000317	Pa×s	656.74	Joback Method

Sources

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=R184362&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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