Decyl octyl ether

Inchi: InChI=1S/C18H38O/c1-3-5-7-9-11-12-14-16-18-19-17-15-13-10-8-6-4-2/h3-18H2,1-2H3
InchiKey: BTWPHTDACLVGMG-UHFFFAOYSA-N
Formula: C18H38O
SMILES: CCCCCCCCCCOCCCCCCCC
Mol. weight [g/mol]: 270.49

Physical Properties

Property code	Value	Unit	Source
gf	-4.32	kJ/mol	Joback Method
hf	-547.07	kJ/mol	Joback Method
hfus	43.56	kJ/mol	Joback Method
hvap	58.07	kJ/mol	Joback Method
log10ws	-6.44		Crippen Method
logp	6.504		Crippen Method
mcvol	270.350	ml/mol	McGowan Method
pc	1139.03	kPa	Joback Method
rinpol	1862.00		NIST Webbook
rinpol	1862.00		NIST Webbook
tb	633.66	K	Joback Method
tc	793.51	K	Joback Method
tf	314.85	K	Joback Method
vc	1.062	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	756.63	J/mol×K	633.66	Joback Method
cpg	776.45	J/mol×K	660.30	Joback Method
cpg	795.50	J/mol×K	686.94	Joback Method
cpg	813.78	J/mol×K	713.58	Joback Method
cpg	831.31	J/mol×K	740.23	Joback Method
cpg	848.10	J/mol×K	766.87	Joback Method
cpg	864.19	J/mol×K	793.51	Joback Method
dvisc	0.0028718	Pa×s	314.85	Joback Method

dvisc	0.0010825	Pa×s	367.99	Joback Method
dvisc	0.0005220	Pa×s	421.12	Joback Method
dvisc	0.0002964	Pa×s	474.25	Joback Method
dvisc	0.0001886	Pa×s	527.39	Joback Method
dvisc	0.0001304	Pa×s	580.52	Joback Method
dvisc	0.0000959	Pa×s	633.66	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=U406383&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

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