

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:	CCCCCCCCCOCCCCCCCC
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
mvol	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	m ³ /kmol	Joback Method

Temperature Dependent Properties

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

dvisc	0.0010825	Paxs	367.99	Joback Method
dvisc	0.0005220	Paxs	421.12	Joback Method
dvisc	0.0002964	Paxs	474.25	Joback Method
dvisc	0.0001886	Paxs	527.39	Joback Method
dvisc	0.0001304	Paxs	580.52	Joback Method
dvisc	0.0000959	Paxs	633.66	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=U406383&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

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