

Isobutyl tetradecyl ether

Inchi:	InChI=1S/C18H38O/c1-4-5-6-7-8-9-10-11-12-13-14-15-16-19-17-18(2)3/h18H,4-17H2,1-
InchiKey:	WMSPFJNZFZJMJS-UHFFFAOYSA-N
Formula:	C18H38O
SMILES:	CCCCCCCCCCCCCOCC(C)C
Mol. weight [g/mol]:	270.49

Physical Properties

Property code	Value	Unit	Source
gf	-6.76	kJ/mol	Joback Method
hf	-552.35	kJ/mol	Joback Method
hfus	40.04	kJ/mol	Joback Method
hvap	57.68	kJ/mol	Joback Method
log10ws	-6.20		Crippen Method
logp	6.360		Crippen Method
mvol	270.350	ml/mol	McGowan Method
pc	1145.21	kPa	Joback Method
rinpol	1826.00		NIST Webbook
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tb	633.22	K	Joback Method
tc	794.97	K	Joback Method
tf	299.85	K	Joback Method
vc	1.056	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	756.95	J/molxK	633.22	Joback Method
cpg	777.05	J/molxK	660.18	Joback Method
cpg	796.35	J/molxK	687.14	Joback Method
cpg	814.85	J/molxK	714.10	Joback Method
cpg	832.58	J/molxK	741.06	Joback Method
cpg	849.56	J/molxK	768.02	Joback Method
cpg	865.80	J/molxK	794.97	Joback Method
dvisc	0.0039951	Paxs	299.85	Joback Method

dvisc	0.0012920	Paxs	355.41	Joback Method
dvisc	0.0005670	Paxs	410.97	Joback Method
dvisc	0.0003027	Paxs	466.54	Joback Method
dvisc	0.0001847	Paxs	522.10	Joback Method
dvisc	0.0001240	Paxs	577.66	Joback Method
dvisc	0.0000892	Paxs	633.22	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=U406327&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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