Octadecane, 9,10-dimethyl

Inchi: InChI=1S/C20H42/c1-5-7-9-11-13-15-17-19(3)20(4)18-16-14-12-10-8-6-2/h19-20H,5-18H
InchiKey: IZWHERZFONYXEC-UHFFFAOYSA-N
Formula: C20H42
SMILES: CCCCCCCCC(C)C(C)CCCCCCCC
Mol. weight [g/mol]: 282.55

Physical Properties

Property code	Value	Unit	Source
gf	112.64	kJ/mol	Joback Method
hf	-466.69	kJ/mol	Joback Method
hfus	40.51	kJ/mol	Joback Method
hvap	59.34	kJ/mol	Joback Method
log10ws	-7.71		Crippen Method
logp	7.760		Crippen Method
mcvol	292.660	ml/mol	McGowan Method
pc	1025.97	kPa	Joback Method
rinpol	1898.00		NIST Webbook
tb	656.12	K	Joback Method
tc	819.90	K	Joback Method
tf	285.16	K	Joback Method
vc	1.143	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	841.15	J/mol×K	656.12	Joback Method
cpg	862.59	J/mol×K	683.42	Joback Method
cpg	883.13	J/mol×K	710.71	Joback Method
cpg	902.79	J/mol×K	738.01	Joback Method
cpg	921.59	J/mol×K	765.31	Joback Method
cpg	939.58	J/mol×K	792.60	Joback Method
cpg	956.77	J/mol×K	819.90	Joback Method
dvisc	0.0075349	Pa×s	285.16	Joback Method
dvisc	0.0018250	Pa×s	346.99	Joback Method

dvisc	0.0006788	Pa×s	408.81	Joback Method
dvisc	0.0003274	Pa×s	470.64	Joback Method
dvisc	0.0001870	Pa×s	532.47	Joback Method
dvisc	0.0001200	Pa×s	594.29	Joback Method
dvisc	0.0000838	Pa×s	656.12	Joback Method

Sources

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=R9466&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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