Octadecane, 2,6,10,15-tetramethyl

Inchi: InChI=1S/C22H46/c1-7-12-20(4)14-8-9-15-21(5)17-11-18-22(6)16-10-13-19(2)3/h19-22H
InchiKey: GTWBTECDVHMDOK-UHFFFAOYSA-N
Formula: C22H46
SMILES: CCCC(C)CCCCC(C)CCCC(C)CCCC(C)C
Mol. weight [g/mol]: 310.60

Physical Properties

Property code	Value	Unit	Source
gf	124.60	kJ/mol	Joback Method
hf	-518.53	kJ/mol	Joback Method
hfus	38.64	kJ/mol	Joback Method
hvap	63.01	kJ/mol	Joback Method
log10ws	-8.06		Crippen Method
logp	8.252		Crippen Method
mcvol	320.840	ml/mol	McGowan Method
pc	919.39	kPa	Joback Method
rinpol	1990.00		NIST Webbook
rinpol	1970.00		NIST Webbook
rinpol	1970.00		NIST Webbook
tb	701.00	K	Joback Method
tc	870.08	K	Joback Method
tf	277.70	K	Joback Method
vc	1.244	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	963.48	J/mol×K	701.00	Joback Method
cpg	986.10	J/mol×K	729.18	Joback Method
cpg	1007.71	J/mol×K	757.36	Joback Method
cpg	1028.34	J/mol×K	785.54	Joback Method
cpg	1048.01	J/mol×K	813.72	Joback Method
cpg	1066.76	J/mol×K	841.90	Joback Method
cpg	1084.62	J/mol×K	870.08	Joback Method

dvisc	0.0136332	Pa×s	277.70	Joback Method
dvisc	0.0021479	Pa×s	348.25	Joback Method
dvisc	0.0006307	Pa×s	418.80	Joback Method
dvisc	0.0002637	Pa×s	489.35	Joback Method
dvisc	0.0001373	Pa×s	559.90	Joback Method
dvisc	0.0000828	Pa×s	630.45	Joback Method
dvisc	0.0000552	Pa×s	701.00	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
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=R48122&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