Octadecane, 5-methyl-

Other names: 5-methyloctadecane
Inchi: InChI=1S/C19H40/c1-4-6-8-9-10-11-12-13-14-15-16-18-19(3)17-7-5-2/h19H,4-18H2,1-3H
InchiKey: FRVYSTFGTANOHG-UHFFFAOYSA-N
Formula: C19H40
SMILES: CCCCCCCCCCCCCC(C)CCCC
Mol. weight [g/mol]: 268.52
CAS: 25117-35-5

Physical Properties

Property code	Value	Unit	Source
gf	106.66	kJ/mol	Joback Method
hf	-440.77	kJ/mol	Joback Method
hfus	41.44	kJ/mol	Joback Method
hvap	57.50	kJ/mol	Joback Method
log10ws	-7.53		Crippen Method
logp	7.514		Crippen Method
mcvol	278.570	ml/mol	McGowan Method
pc	1086.35	kPa	Joback Method
rinpol	1853.00		NIST Webbook
rinpol	1854.00		NIST Webbook
rinpol	1853.00		NIST Webbook
rinpol	1853.60		NIST Webbook
tb	633.68	K	Joback Method
tc	794.96	K	Joback Method
tf	260.00 ± 3.00	K	NIST Webbook
vc	1.093	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	781.70	J/mol×K	633.68	Joback Method
cpg	802.48	J/mol×K	660.56	Joback Method
cpg	822.41	J/mol×K	687.44	Joback Method
cpg	841.51	J/mol×K	714.32	Joback Method

cpg	859.82	J/mol×K	741.20	Joback Method
cpg	877.35	J/mol×K	768.08	Joback Method
cpg	894.13	J/mol×K	794.96	Joback Method
dvisc	0.0057089	Pa×s	288.89	Joback Method
dvisc	0.0016729	Pa×s	346.36	Joback Method
dvisc	0.0006952	Pa×s	403.82	Joback Method
dvisc	0.0003595	Pa×s	461.29	Joback Method
dvisc	0.0002152	Pa×s	518.75	Joback Method
dvisc	0.0001427	Pa×s	576.22	Joback Method
dvisc	0.0001019	Pa×s	633.68	Joback Method
hvapt	63.80	kJ/mol	520.00	NIST Webbook

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=C25117355&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
hvapt:	Enthalpy of vaporization at a given temperature
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