Tetradecane, 5-ethyl

Other names: 5-ethyltetradecane
Inchi: InChI=1S/C16H34/c1-4-7-9-10-11-12-13-15-16(6-3)14-8-5-2/h16H,4-15H2,1-3H3
InchiKey: KXBUYAQSOFWTNJ-UHFFFAOYSA-N
Formula: C16H34
SMILES: CCCCCCCCCC(CC)CCCC
Mol. weight [g/mol]: 226.44

Physical Properties

Property code	Value	Unit	Source
gf	81.40	kJ/mol	Joback Method
hf	-378.85	kJ/mol	Joback Method
hfus	33.67	kJ/mol	Joback Method
hvap	50.82	kJ/mol	Joback Method
log10ws	-6.28		Crippen Method
logp	6.344		Crippen Method
mcvol	236.300	ml/mol	McGowan Method
pc	1326.17	kPa	Joback Method
rinpol	1528.00		NIST Webbook
rinpol	1538.00		NIST Webbook
rinpol	1568.00		NIST Webbook
rinpol	1568.00		NIST Webbook
tb	565.04	K	Joback Method
tc	726.28	K	Joback Method
tf	255.08	K	Joback Method
vc	0.925	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	611.96	J/mol×K	565.04	Joback Method
cpg	631.47	J/mol×K	591.91	Joback Method
cpg	650.21	J/mol×K	618.79	Joback Method
cpg	668.20	J/mol×K	645.66	Joback Method
cpg	685.47	J/mol×K	672.53	Joback Method

cpg	702.03	J/mol×K	699.40	Joback Method
cpg	717.90	J/mol×K	726.28	Joback Method
dvisc	0.0077044	Pa×s	255.08	Joback Method
dvisc	0.0022640	Pa×s	306.74	Joback Method
dvisc	0.0009470	Pa×s	358.40	Joback Method
dvisc	0.0004934	Pa×s	410.06	Joback Method
dvisc	0.0002974	Pa×s	461.72	Joback Method
dvisc	0.0001985	Pa×s	513.38	Joback Method
dvisc	0.0001427	Pa×s	565.04	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=R8834&Units=SI
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

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