Octadecane, 5,14-dibutyl-

Other names:	5,14-Di-n-butyloctadecane
	5,14-Dibutyloctadecane
Inchi:	InChI=1S/C26H54/c1-5-9-19-25(20-10-6-2)23-17-15-13-14-16-18-24-26(21-11-7-3)22-12
InchiKey:	VZZCEMBCJSFMMD-UHFFFAOYSA-N
Formula:	C26H54
SMILES:	CCCCC(CCCC)CCCCCCCCC(CCCC)CCCC
Mol. weight [g/mol]:	366.71
CAS:	55282-13-8

Physical Properties

Property code	Value	Unit	Source
gf	163.16	kJ/mol	Joback Method
hf	-590.53	kJ/mol	Joback Method
hfus	56.05	kJ/mol	Joback Method
hvap	72.69	kJ/mol	Joback Method
log10ws	-10.22		Crippen Method
logp	10.100		Crippen Method
mcvol	377.200	ml/mol	McGowan Method
pc	731.25	kPa	Joback Method
tb	793.40	K	Joback Method
tc	971.62	K	Joback Method
tf	278.90 ± 0.50	K	NIST Webbook
tf	278.90 ± 0.50	K	NIST Webbook
tf	278.85	K	NIST Webbook
tf	278.90 ± 2.00	K	NIST Webbook
vc	1.480	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1344.80	J/mol×K	971.62	Joback Method
cpg	1217.07	J/mol×K	793.40	Joback Method
cpg	1241.13	J/mol×K	823.10	Joback Method
cpg	1264.02	J/mol×K	852.81	Joback Method

cpg	1285.78	J/mol×K	882.51	Joback Method
cpg	1306.47	J/mol×K	912.22	Joback Method
cpg	1326.13	J/mol×K	941.92	Joback Method
dvisc	0.0000369	Pa×s	793.40	Joback Method
dvisc	0.0031975	Pa×s	352.78	Joback Method
dvisc	0.0008010	Pa×s	426.22	Joback Method
dvisc	0.0003014	Pa×s	499.65	Joback Method
dvisc	0.0001457	Pa×s	573.09	Joback Method
dvisc	0.0000831	Pa×s	646.53	Joback Method
dvisc	0.0000531	Pa×s	719.96	Joback Method
hvapt	89.30	kJ/mol	483.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.63784e+01
Coeff. B	-6.33671e+03
Coeff. C	-1.30190e+02
Temperature range (K), min.	524.00
Temperature range (K), max.	702.77

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=C55282138&Units=SI

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

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
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume