Octadecane, 3-ethyl-5-(2-ethylbutyl)-

Other names:	3-Ethyl-5-(2'-ethylbutyl)octadecane
	3-Ethyl-5-(2-ethylbutyl)octadecane
Inchi:	InChI=1S/C26H54/c1-6-11-12-13-14-15-16-17-18-19-20-21-26(22-24(7-2)8-3)23-25(9-4)1
InchiKey:	MFLJAIATZVGFPM-UHFFFAOYSA-N
Formula:	C26H54
SMILES:	CCCCCCCCCCCCCC(CC(CC)CC)CC(CC)CC
Mol. weight [g/mol]:	366.71
CAS:	55282-12-7

Physical Properties

Property code	Value	Unit	Source
gf	160.72	kJ/mol	Joback Method
hf	-595.81	kJ/mol	Joback Method
hfus	52.53	kJ/mol	Joback Method
hvap	72.31	kJ/mol	Joback Method
log10ws	-9.98		Crippen Method
logp	9.956		Crippen Method
mcvol	377.200	ml/mol	McGowan Method
pc	734.42	kPa	Joback Method
tb	792.96	K	Joback Method
tc	971.41	K	Joback Method
tf	337.78	K	Joback Method
vc	1.474	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1345.27	J/mol×K	971.41	Joback Method
cpg	1326.61	J/mol×K	941.67	Joback Method
cpg	1306.95	J/mol×K	911.93	Joback Method
cpg	1286.26	J/mol×K	882.19	Joback Method
cpg	1264.47	J/mol×K	852.44	Joback Method
cpg	1241.56	J/mol×K	822.70	Joback Method
cpg	1217.46	J/mol×K	792.96	Joback Method

dvisc	0.0044687	Pa×s	337.78	Joback Method
dvisc	0.0000339	Pa×s	792.96	Joback Method
dvisc	0.0000498	Pa×s	717.10	Joback Method
dvisc	0.0000799	Pa×s	641.23	Joback Method
dvisc	0.0001458	Pa×s	565.37	Joback Method
dvisc	0.0003203	Pa×s	489.51	Joback Method
dvisc	0.0009396	Pa×s	413.64	Joback Method
hvapt	88.40	kJ/mol	485.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.68219e+01
Coeff. B	-6.55756e+03
Coeff. C	-1.31677e+02
Temperature range (K), min.	528.28
Temperature range (K), max.	701.38

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C55282127&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

Joback Method: https://en.wikipedia.org/wiki/Joback_method

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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