Octadecane, 9-ethyl-9-heptyl-

Other names: 9-Ethyl-9-n-heptyloctadecane
Inchi: InChI=1S/C27H56/c1-5-9-12-15-17-20-23-26-27(8-4,24-21-18-14-11-7-3)25-22-19-16-13
InchiKey: LRJHOBBNMAGOIG-UHFFFAOYSA-N
Formula: C27H56
SMILES: CCCCCCCCCC(CC)(CCCCCCC)CCCCCCCC
Mol. weight [g/mol]: 380.73
CAS: 55282-27-4

Physical Properties

Property code	Value	Unit	Source
gf	179.30	kJ/mol	Joback Method
hf	-609.36	kJ/mol	Joback Method
hfus	58.27	kJ/mol	Joback Method
hvap	74.40	kJ/mol	Joback Method
log10ws	-10.88		Crippen Method
logp	10.635		Crippen Method
mcvol	391.290	ml/mol	McGowan Method
pc	695.81	kPa	Joback Method
tb	813.93	K	Joback Method
tc	996.49	K	Joback Method
tf	193.00 ± 5.00	K	NIST Webbook
vc	1.536	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1282.03	J/mol×K	813.93	Joback Method
cpg	1306.42	J/mol×K	844.36	Joback Method
cpg	1329.60	J/mol×K	874.78	Joback Method
cpg	1351.65	J/mol×K	905.21	Joback Method
cpg	1372.63	J/mol×K	935.64	Joback Method
cpg	1392.59	J/mol×K	966.07	Joback Method
cpg	1411.62	J/mol×K	996.49	Joback Method
dvisc	0.0016537	Pa×s	396.47	Joback Method

dvisc	0.0005159	Pa×s	466.05	Joback Method
dvisc	0.0002178	Pa×s	535.62	Joback Method
dvisc	0.0001122	Pa×s	605.20	Joback Method
dvisc	0.0000662	Pa×s	674.78	Joback Method
dvisc	0.0000431	Pa×s	744.35	Joback Method
dvisc	0.0000302	Pa×s	813.93	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C55282274&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
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
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume