Naphthalene, 1,1'-undecylidenebis[decahydro-

Other names:	1,1-Di(1'-decahydronaphthyl)undecane
	1,1-Di-(decahydro-1-naphthyl)undecane
	1,1-bis(decahydro-1-naphthyl)undecane
	Naphthalene, 1,1'-undecylidenebis*decahydro-
	Undecane, 1,1-bis(decahydro-1-naphthyl)-
Inchi:	InChI=1S/C31H56/c1-2-3-4-5-6-7-8-9-22-31(29-23-14-18-25-16-10-12-20-27(25)29)30-24
InchiKey:	BMIYKWRBLFKRLB-UHFFFAOYSA-N
Formula:	C31H56
SMILES:	CCCCCCCCCCC(C1CCCC2CCCCC21)C1CCCC2CCCCC21
Mol. weight [g/mol]:	428.78
CAS:	55373-96-1

Physical Properties

Property code	Value	Unit	Source
gf	338.48	kJ/mol	Joback Method
hf	-487.21	kJ/mol	Joback Method
hfus	50.40	kJ/mol	Joback Method
hvap	84.62	kJ/mol	Joback Method
log10ws	-10.69		Crippen Method
logp	10.346		Crippen Method
mcvol	404.210	ml/mol	McGowan Method
pc	801.60	kPa	Joback Method
tb	960.02	K	Joback Method
tc	1182.16	K	Joback Method
tf	459.25	K	Joback Method
vc	1.528	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1668.72	J/mol×K	1182.16	Joback Method
cpg	1650.67	J/mol×K	1145.14	Joback Method
cpg	1631.28	J/mol×K	1108.12	Joback Method
cpg	1610.41	J/mol×K	1071.09	Joback Method

cpg	1587.93	J/mol×K	1034.07	Joback Method
cpg	1563.69	J/mol×K	997.04	Joback Method
cpg	1537.54	J/mol×K	960.02	Joback Method
dvisc	0.0028215	Pa×s	459.25	Joback Method
dvisc	0.0001815	Pa×s	960.02	Joback Method
dvisc	0.0002307	Pa×s	876.56	Joback Method
dvisc	0.0003083	Pa×s	793.10	Joback Method
dvisc	0.0004411	Pa×s	709.63	Joback Method
dvisc	0.0006943	Pa×s	626.17	Joback Method
dvisc	0.0012566	Pa×s	542.71	Joback Method
hvapt	110.50	kJ/mol	543.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.73251e+01
Coeff. B	-9.55167e+03
Temperature range (K), min.	560.63
Temperature range (K), max.	795.07

Sources

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C55373961&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

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