Cyclohexane, (1-decylundecyl)-

Other names:	Heneicosane, 11-cyclohexyl- 11-Cyclohexylheneicosane
Inchi:	InChI=1S/C27H54/c1-3-5-7-9-11-13-15-18-22-26(27-24-20-17-21-25-27)23-19-16-14-12-
InchiKey:	ZSEPDKTYQJRZIS-UHFFFAOYSA-N
Formula:	C27H54
SMILES:	CCCCCCCCCCC(CCCCCCCCCC)C1CCCCC1
Mol. weight [g/mol]:	378.72
CAS:	6703-99-7

Physical Properties

Property code	Value	Unit	Source
chl	-17651.90 ± 7.10	kJ/mol	NIST Webbook
chl	-17652.30 ± 7.10	kJ/mol	NIST Webbook
gf	198.47	kJ/mol	Joback Method
hf	-551.57	kJ/mol	Joback Method
hfl	-690.70 ± 0.30	kJ/mol	NIST Webbook
hfl	-689.90 ± 7.20	kJ/mol	NIST Webbook
hfus	54.00	kJ/mol	Joback Method
hvap	75.74	kJ/mol	Joback Method
log10ws	-10.54		Crippen Method
logp	10.244		Crippen Method
mcvol	380.430	ml/mol	McGowan Method
pc	772.89	kPa	Joback Method
tb	836.27	K	Joback Method
tc	1025.41	K	Joback Method
tf	266.00 ± 0.70	K	NIST Webbook
tf	266.50 ± 0.70	K	NIST Webbook
tf	265.95 ± 0.40	K	NIST Webbook
tf	265.95 ± 0.50	K	NIST Webbook
tt	294.30 ± 0.20	K	NIST Webbook
vc	1.474	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1412.68	J/mol×K	1025.41	Joback Method
cpg	1283.58	J/mol×K	836.27	Joback Method
cpg	1308.37	J/mol×K	867.79	Joback Method
cpg	1331.77	J/mol×K	899.32	Joback Method
cpg	1353.84	J/mol×K	930.84	Joback Method
cpg	1374.64	J/mol×K	962.36	Joback Method
cpg	1394.23	J/mol×K	993.89	Joback Method
dvisc	0.0000360	Pa×s	836.27	Joback Method
dvisc	0.0023926	Pa×s	386.43	Joback Method
dvisc	0.0006735	Pa×s	461.40	Joback Method
dvisc	0.0002702	Pa×s	536.38	Joback Method
dvisc	0.0001356	Pa×s	611.35	Joback Method
dvisc	0.0000791	Pa×s	686.32	Joback Method
dvisc	0.0000513	Pa×s	761.30	Joback Method
hvapt	107.00	kJ/mol	507.00	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C6703997&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

chl: Standard liquid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
gf: Standard Gibbs free energy of formation
hf: Enthalpy of formation at standard conditions
hfl: Liquid phase 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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume