Cyclopentane, undecyl-

Other names:	1-Undecylcyclopentane
	Undecane, 1-cyclopentyl-
	Undecylcyclopentane
	n-Undecylcyclopentane
Inchi:	InChI=1S/C16H32/c1-2-3-4-5-6-7-8-9-10-13-16-14-11-12-15-16/h16H,2-15H2,1H3
InchiKey:	FIWKORYTHDYMGF-UHFFFAOYSA-N
Formula:	C16H32
SMILES:	CCCCCCCCCCCC1CCCC1
Mol. weight [g/mol]:	224.43
CAS:	6785-23-5

Physical Properties

Property code	Value	Unit	Source
chl	-10557.10 ± 2.30	kJ/mol	NIST Webbook
gf	120.39	kJ/mol	Joback Method
hf	-312.50 ± 2.50	kJ/mol	NIST Webbook
hfus	31.13	kJ/mol	Joback Method
hvap	80.60	kJ/mol	NIST Webbook
log10ws	-6.17		Crippen Method
logp	6.098		Crippen Method
mcvol	225.440	ml/mol	McGowan Method
pc	1509.33	kPa	Joback Method
rinpol	1656.00		NIST Webbook
rinpol	1636.40		NIST Webbook
rinpol	1636.40		NIST Webbook
tb	580.76	K	Joback Method
tc	758.98	K	Joback Method
tf	280.98	K	Joback Method
vc	0.873	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	603.65	J/mol×K	580.76	Joback Method

cpg	625.27	J/mol×K	610.46	Joback Method
cpg	645.89	J/mol×K	640.17	Joback Method
cpg	665.52	J/mol×K	669.87	Joback Method
cpg	684.22	J/mol×K	699.57	Joback Method
cpg	702.00	J/mol×K	729.28	Joback Method
cpg	718.91	J/mol×K	758.98	Joback Method
dvisc	0.0050474	Pa×s	280.98	Joback Method
dvisc	0.0019946	Pa×s	330.94	Joback Method
dvisc	0.0010056	Pa×s	380.91	Joback Method
dvisc	0.0005943	Pa×s	430.87	Joback Method
dvisc	0.0003918	Pa×s	480.83	Joback Method
dvisc	0.0002793	Pa×s	530.80	Joback Method
dvisc	0.0002111	Pa×s	580.76	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.61069e+01
Coeff. B	-5.22422e+03
Coeff. C	-9.92650e+01
Temperature range (K), min.	429.51
Temperature range (K), max.	583.19

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C6785235&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

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
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
pvap:	Vapor pressure
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume