Tridecane 7-cyclohexyl-, 7-cyclohexyl-

Other names: 7-Cyclohexyltridecane
Cyclohexane, 1-hexylheptyl
Inchi: InChI=1S/C19H38/c1-3-5-7-10-14-18(15-11-8-6-4-2)19-16-12-9-13-17-19/h18-19H,3-17H
InchiKey: UVRPAYBHYYNXMX-UHFFFAOYSA-N
Formula: C19H38
SMILES: CCCCCCC(CCCCCC)C1CCCCC1
Mol. weight [g/mol]: 266.51
CAS: 13151-92-3

Physical Properties

Property code	Value	Unit	Source
af	0.6536		Cheméo Relay (1.0)
gf	131.11	kJ/mol	Joback Method
hf	-363.14	kJ/mol	Cheméo Relay (1.0)
hfus	33.28	kJ/mol	Joback Method
hvap	82.89	kJ/mol	Cheméo Relay (1.0)
ie	9.51	eV	Cheméo Relay (1.0)
log10ws	-7.86		Cheméo Relay (1.0)
logp	7.124		Crippen Method
mcvol	267.710	ml/mol	McGowan Method
pc	1249.49	kPa	Joback Method
rinpol	1854.00		NIST Webbook
tb	594.81	K	Cheméo Relay (1.0)
tc	771.73	K	Cheméo Relay (1.0)
tf	251.26	K	Cheméo Relay (1.0)
vc	0.983	m3/kmol	Cheméo Relay (1.0)

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	885.42	J/mol×K	805.03	Joback Method
cpg	903.46	J/mol×K	835.39	Joback Method
cpg	802.67	J/mol×K	683.59	Joback Method
cpg	825.01	J/mol×K	713.95	Joback Method

cpg	846.23	J/mol×K	744.31	Joback Method
cpg	866.35	J/mol×K	774.67	Joback Method
cpg	779.15	J/mol×K	653.23	Joback Method
dvisc	0.0007846	Pa×s	415.26	Joback Method
dvisc	0.0019506	Pa×s	355.76	Joback Method
dvisc	0.0069912	Pa×s	296.27	Joback Method
dvisc	0.0003965	Pa×s	474.75	Joback Method
dvisc	0.0002333	Pa×s	534.24	Joback Method
dvisc	0.0001526	Pa×s	593.74	Joback Method
dvisc	0.0001079	Pa×s	653.23	Joback Method
hvapt	75.60	kJ/mol	420.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.26459e+01
Coeff. B	-4.00842e+03
Coeff. C	-9.85240e+01
Temperature range (K), min.	422.87
Temperature range (K), max.	645.05

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C13151923&Units=SI

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

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

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Cheméo Relay (1.0):

Cheméo Relay (1.0, beta):

The Yaws Handbook of Vapor Pressure: https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

af:	Acentric Factor
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
ie:	Ionization energy
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