

Tridecane, 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(CCCCC)C1CCCCC1
Mol. weight [g/mol]:	266.50
CAS:	13151-92-3

Physical Properties

Property code	Value	Unit	Source
gf	131.11	kJ/mol	Joback Method
hf	-386.45	kJ/mol	Joback Method
hfus	33.28	kJ/mol	Joback Method
hvap	57.93	kJ/mol	Joback Method
log10ws	-7.19		Crippen Method
logp	7.124		Crippen Method
mvol	267.710	ml/mol	McGowan Method
pc	1249.49	kPa	Joback Method
rinpol	1854.00		NIST Webbook
tb	653.23	K	Joback Method
tc	835.39	K	Joback Method
tf	296.27	K	Joback Method
vc	1.026	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	903.46	J/mol×K	835.39	Joback Method
cpg	885.42	J/mol×K	805.03	Joback Method
cpg	866.35	J/mol×K	774.67	Joback Method
cpg	846.23	J/mol×K	744.31	Joback Method
cpg	825.01	J/mol×K	713.95	Joback Method
cpg	802.67	J/mol×K	683.59	Joback Method

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

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{vp}) = A + B/(T + C)$
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

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C13151923&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/ci9903071

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

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