1,1-Dicyclohexyldodecane

Inchi: InChI=1S/C24H46/c1-2-3-4-5-6-7-8-9-16-21-24(22-17-12-10-13-18-22)23-19-14-11-15-20
InchiKey: ZNUYDMONISMCKK-UHFFFAOYSA-N
Formula: C24H46
SMILES: CCCCCCCCCCCC(C1CCCCC1)C1CCCCC1
Mol. weight [g/mol]: 334.62
CAS: 18254-57-4

Physical Properties

Property code	Value	Unit	Source
gf	197.66	kJ/mol	Joback Method
hf	-435.33	kJ/mol	Joback Method
hfus	38.06	kJ/mol	Joback Method
hvap	69.49	kJ/mol	Joback Method
log10ws	-8.93		Crippen Method
logp	8.684		Crippen Method
mcvol	327.300	ml/mol	McGowan Method
pc	1037.90	kPa	Joback Method
ss	545.70	J/mol×K	NIST Webbook
ss	545.60	J/mol×K	NIST Webbook
tb	787.18	K	Joback Method
tc	986.94	K	Joback Method
tf	360.00	K	Joback Method
tt	300.60 ± 0.20	K	NIST Webbook
tt	300.58 ± 0.02	K	NIST Webbook
vc	1.240	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	1183.10	J/mol×K	920.35	Joback Method
cpg	1202.88	J/mol×K	953.65	Joback Method
cpg	1089.16	J/mol×K	787.18	Joback Method
cpg	1114.99	J/mol×K	820.47	Joback Method
cpg	1139.22	J/mol×K	853.77	Joback Method

cpg	1161.90	J/mol×K	887.06	Joback Method
cpg	1221.32	J/mol×K	986.94	Joback Method
cps	562.60	J/mol×K	298.15	NIST Webbook
cps	562.70	J/mol×K	298.15	NIST Webbook
dvisc	0.0000828	Pa×s	715.98	Joback Method
dvisc	0.0000577	Pa×s	787.18	Joback Method
dvisc	0.0042798	Pa×s	360.00	Joback Method
dvisc	0.0011545	Pa×s	431.20	Joback Method
dvisc	0.0004515	Pa×s	502.39	Joback Method
dvisc	0.0002229	Pa×s	573.59	Joback Method
dvisc	0.0001286	Pa×s	644.79	Joback Method
hfust	44.35	kJ/mol	300.60	NIST Webbook
hfust	44.27	kJ/mol	300.60	NIST Webbook
hfust	44.27	kJ/mol	300.58	NIST Webbook
sfust	147.30	J/mol×K	300.60	NIST Webbook
sfust	147.30	J/mol×K	300.58	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.29543e+01
Coeff. B	-4.66701e+03
Coeff. C	-1.24672e+02
Temperature range (K), min.	493.12
Temperature range (K), max.	735.31

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C18254574&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

cpg:	Ideal gas heat capacity
cps:	Solid phase 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
hfust:	Enthalpy of fusion at a given temperature
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
sfust:	Entropy of fusion at a given temperature
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature
vc:	Critical Volume