Methane, tricyclohexyl-

Other names: Cyclohexane, 1,1',1''-methylidynetris-
Tricyclohexylmethane
Inchi: InChI=1S/C19H34/c1-4-10-16(11-5-1)19(17-12-6-2-7-13-17)18-14-8-3-9-15-18/h16-19H,
InchiKey: SQDGPLNZHYWEOB-UHFFFAOYSA-N
Formula: C19H34
SMILES: C1CCC(C(C2CCCCC2)C2CCCCC2)CC1
Mol. weight [g/mol]: 262.47
CAS: 1610-24-8

Physical Properties

Property code	Value	Unit	Source
gf	180.01	kJ/mol	Joback Method
hf	-277.81	kJ/mol	Joback Method
hfus	16.95	kJ/mol	Joback Method
hvap	58.79	kJ/mol	Joback Method
log10ws	-6.49		Crippen Method
logp	6.344		Crippen Method
mcvol	245.990	ml/mol	McGowan Method
pc	1708.95	kPa	Joback Method
tb	692.33	K	Joback Method
tc	937.25	K	Joback Method
tf	332.00 ± 2.00	K	NIST Webbook
tf	332.20 ± 2.00	K	NIST Webbook
tf	329.00 ± 3.00	K	NIST Webbook
tf	328.55 ± 0.50	K	NIST Webbook
vc	0.892	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	886.06	J/mol×K	855.61	Joback Method
cpg	928.17	J/mol×K	937.25	Joback Method
cpg	908.12	J/mol×K	896.43	Joback Method
cpg	775.77	J/mol×K	692.33	Joback Method

cpg	806.85	J/mol×K	733.15	Joback Method
cpg	835.52	J/mol×K	773.97	Joback Method
cpg	861.89	J/mol×K	814.79	Joback Method
dvisc	0.0001190	Pa×s	692.33	Joback Method
dvisc	0.0002690	Pa×s	565.23	Joback Method
dvisc	0.0001717	Pa×s	628.78	Joback Method
dvisc	0.0101376	Pa×s	311.03	Joback Method
dvisc	0.0025781	Pa×s	374.58	Joback Method
dvisc	0.0009754	Pa×s	438.13	Joback Method
dvisc	0.0004721	Pa×s	501.68	Joback Method
hsubt	117.40	kJ/mol	311.00	NIST Webbook
hvapt	73.30	kJ/mol	516.50	NIST Webbook
hvapt	81.40	kJ/mol	349.00	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.42305e+01
Coeff. B	-5.01608e+03
Coeff. C	-9.20280e+01
Temperature range (K), min.	451.79
Temperature range (K), max.	654.43

Sources

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=C1610248&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

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
hsubt:	Enthalpy of sublimation at a given temperature
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume