Cyclohexane, 1,4-dimethyl-

Other names:	p-Dimethylcyclohexane
	1,4-Dimethylcyclohexane
	1,4-Dimethylcyclohexane,c&t
	cis-trans-1,4-Dimethylcyclohexane
	Hexahydroxylene
	UN 2263
	1,4-Dimethylcyclohexane(c,t)
Inchi:	InChI=1S/C8H16/c1-7-3-5-8(2)6-4-7/h7-8H,3-6H2,1-2H3
InchiKey:	QRMPKOFEUHIBNM-UHFFFAOYSA-N
Formula:	C8H16
SMILES:	CC1CCC(C)CC1
Mol. weight [g/mol]:	112.21
CAS:	589-90-2

Physical Properties

Property code	Value	Unit	Source
chl	-5183.10	kJ/mol	NIST Webbook
gf	33.22	kJ/mol	Joback Method
hf	-174.47	kJ/mol	Joback Method
hfus	9.38	kJ/mol	Joback Method
hvap	33.52	kJ/mol	Joback Method
log10ws	-2.58		Crippen Method
logp	2.833		Crippen Method
mcvol	112.720	ml/mol	McGowan Method
pc	3038.96	kPa	Joback Method
rinpol	807.00		NIST Webbook
rinpol	821.00		NIST Webbook
rinpol	782.00		NIST Webbook
rinpol	777.00		NIST Webbook
rinpol	805.00		NIST Webbook
rinpol	811.42		NIST Webbook
rinpol	805.00		NIST Webbook
rinpol	806.30		NIST Webbook
rinpol	814.00		NIST Webbook
rinpol	803.00		NIST Webbook
rinpol	771.00		NIST Webbook
rinpol	785.00		NIST Webbook

rinpol	789.00		NIST Webbook
rinpol	785.00		NIST Webbook
rinpol	810.00		NIST Webbook
rinpol	801.00		NIST Webbook
rinpol	805.00		NIST Webbook
tb	410.65 ± 3.00	K	NIST Webbook
tb	393.20	K	NIST Webbook
tb	393.00 ± 2.00	K	NIST Webbook
tb	392.00 ± 2.00	K	NIST Webbook
tb	396.00 ± 1.00	K	NIST Webbook
tb	393.30 ± 1.00	K	NIST Webbook
tb	396.20 ± 3.00	K	NIST Webbook
tb	397.74 ± 0.40	K	NIST Webbook
tb	393.80 ± 0.50	K	NIST Webbook
tb	394.90 ± 1.50	K	NIST Webbook
tb	396.30 ± 1.00	K	NIST Webbook
tb	392.90 ± 2.00	K	NIST Webbook
tc	597.67	K	Joback Method
tf	183.06	K	Joback Method
vc	0.415	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	212.54	J/mol×K	397.32	Joback Method
cpg	230.28	J/mol×K	430.71	Joback Method
cpg	247.23	J/mol×K	464.10	Joback Method
cpg	263.41	J/mol×K	497.49	Joback Method
cpg	278.84	J/mol×K	530.89	Joback Method
cpg	293.52	J/mol×K	564.28	Joback Method
cpg	307.47	J/mol×K	597.67	Joback Method
dvisc	0.0041986	Pa×s	183.06	Joback Method
dvisc	0.0018154	Pa×s	218.77	Joback Method
dvisc	0.0009932	Pa×s	254.48	Joback Method
dvisc	0.0006303	Pa×s	290.19	Joback Method
dvisc	0.0004419	Pa×s	325.90	Joback Method
dvisc	0.0003324	Pa×s	361.61	Joback Method
dvisc	0.0002631	Pa×s	397.32	Joback Method

Sources

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
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C589902&Units=SI

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