Cyclopropane, 1,2-dimethyl-, cis-

Other names:	1,CIS-2-DIMETHYLCYCLOPROPANE
	CIS-1,2-DIMETHYLCYCLOPROPANE
	c-1,2-Dimethylcyclopropane
Inchi:	InChI=1S/C5H10/c1-4-3-5(4)2/h4-5H,3H2,1-2H3/t4-,5+
InchiKey:	VKJLDXGFBJBTRQ-SYDPRGILSA-N
Formula:	C5H10
SMILES:	CC1CC1C
Mol. weight [g/mol]:	70.13
CAS:	930-18-7

Physical Properties

Property code	Value	Unit	Source
chl	-3370.40 ± 0.59	kJ/mol	NIST Webbook
gf	44.26	kJ/mol	Joback Method
hf	-94.07	kJ/mol	Joback Method
hfl	-26.30 ± 0.67	kJ/mol	NIST Webbook
hfus	7.91	kJ/mol	Joback Method
hvap	26.33	kJ/mol	Joback Method
ie	9.76 ± 0.02	eV	NIST Webbook
log10ws	-1.33		Crippen Method
logp	1.662		Crippen Method
mcvol	70.450	ml/mol	McGowan Method
pc	3901.37	kPa	Joback Method
rinpol	516.00		NIST Webbook
rinpol	515.00		NIST Webbook
rinpol	515.00		NIST Webbook
rinpol	515.80		NIST Webbook
rinpol	518.00		NIST Webbook
rinpol	517.00		NIST Webbook
rinpol	516.00		NIST Webbook
rinpol	516.00		NIST Webbook
rinpol	513.10		NIST Webbook
rinpol	513.00		NIST Webbook
rinpol	514.00		NIST Webbook
rinpol	515.00		NIST Webbook
rinpol	517.00		NIST Webbook
rinpol	517.00		NIST Webbook

rinpol	518.00		NIST Webbook
rinpol	519.00		NIST Webbook
rinpol	516.00		NIST Webbook
rinpol	514.00		NIST Webbook
tb	310.20	K	NIST Webbook
tb	310.45 ± 0.60	K	NIST Webbook
tb	308.55 ± 1.00	K	NIST Webbook
tb	310.18 ± 0.30	K	NIST Webbook
tb	310.18 ± 0.20	K	NIST Webbook
tb	310.45 ± 0.50	K	NIST Webbook
tb	305.65 ± 4.00	K	NIST Webbook
tc	493.17	K	Joback Method
tf	132.20 ± 0.20	K	NIST Webbook
tf	132.24 ± 0.04	K	NIST Webbook
tf	132.25 ± 0.03	K	NIST Webbook
tf	132.22 ± 0.20	K	NIST Webbook
tf	132.22 ± 1.50	K	NIST Webbook
tf	132.28 ± 0.02	K	NIST Webbook
tf	132.07 ± 0.20	K	NIST Webbook
tf	132.24 ± 0.80	K	NIST Webbook
tf	132.25 ± 0.06	K	NIST Webbook
tf	124.28 ± 0.03	K	NIST Webbook
tf	132.22 ± 0.20	K	NIST Webbook
vc	0.272	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	107.14	J/mol×K	315.87	Joback Method
cpg	156.84	J/mol×K	463.62	Joback Method
cpg	147.84	J/mol×K	434.07	Joback Method
cpg	138.38	J/mol×K	404.52	Joback Method
cpg	128.46	J/mol×K	374.97	Joback Method
cpg	118.05	J/mol×K	345.42	Joback Method
cpg	165.41	J/mol×K	493.17	Joback Method
dvisc	0.0001788	Pa×s	315.87	Joback Method
dvisc	0.0001797	Pa×s	289.86	Joback Method
dvisc	0.0001807	Pa×s	263.85	Joback Method
dvisc	0.0001821	Pa×s	237.84	Joback Method
dvisc	0.0001837	Pa×s	211.83	Joback Method
dvisc	0.0001859	Pa×s	185.82	Joback Method

dvisc	0.0001888	Pa×s	159.81	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.53715e+01
Coeff. B	-3.02830e+03
Coeff. C	-2.73800e+01
Temperature range (K), min.	228.14
Temperature range (K), max.	328.40

Sources

KDB:	https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=451
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C930187&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

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
hfl:	Liquid phase enthalpy of formation at standard conditions
hfus:	Enthalpy of fusion at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
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