Cyclohexene, 4-methyl-1-(1-methylethyl)-

Other names:	1-Isopropyl-4-methylcyclohexene
	3-Menthene
	3-p-Menthene
	3-para-Menthene
	4-Methyl-1-(1-methylethyl)cyclohexene
	4-Methyl-1-iso-propylcyclohexene
	Menthomenthene
	dl-p-Menth-3-ene
	p-Menth-3-en
	p-Menth-3-ene
	«delta»3-p-Menthene
	Â«deltaÂ»3-p-Menthene
Inchi:	InChI=1S/C10H18/c1-8(2)10-6-4-9(3)5-7-10/h6,8-9H,4-5,7H2,1-3H3
InchiKey:	YYCPSEFQLGXPCO-UHFFFAOYSA-N
Formula:	C10H18
SMILES:	CC1CC=C(C(C)C)CC1
Mol. weight [g/mol]:	138.25
CAS:	500-00-5

Physical Properties

Property code	Value	Unit	Source
chl	-6350.80 ± 2.50	kJ/mol	NIST Webbook
gf	75.66	kJ/mol	Joback Method
hf	-111.20 ± 2.60	kJ/mol	NIST Webbook
hfl	-156.80 ± 2.60	kJ/mol	NIST Webbook
hfus	10.80	kJ/mol	Joback Method
hvap	45.61 ± 0.50	kJ/mol	NIST Webbook
hvap	45.60	kJ/mol	NIST Webbook
log10ws	-3.27		Crippen Method
logp	3.389		Crippen Method
mcvol	136.600	ml/mol	McGowan Method
pc	2646.11	kPa	Joback Method
rinpol	979.00		NIST Webbook
rinpol	1000.00		NIST Webbook
rinpol	986.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	969.00		NIST Webbook

rinpol	983.00		NIST Webbook
rinpol	993.10		NIST Webbook
rinpol	984.00		NIST Webbook
rinpol	976.10		NIST Webbook
rinpol	997.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	1015.00		NIST Webbook
rinpol	974.00		NIST Webbook
rinpol	990.00		NIST Webbook
rinpol	976.00		NIST Webbook
rinpol	993.10		NIST Webbook
ripol	1075.00		NIST Webbook
ripol	1081.00		NIST Webbook
ripol	1075.00		NIST Webbook
tb	273.15 ± 6.00	K	NIST Webbook
tb	444.00 ± 6.00	K	NIST Webbook
tb	440.00 ± 4.00	K	NIST Webbook
tc	656.32	K	Joback Method
tf	208.12	K	Joback Method
vc	0.508	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	286.78	J/mol×K	451.45	Joback Method
cpg	369.91	J/mol×K	622.17	Joback Method
cpg	354.99	J/mol×K	588.03	Joback Method
cpg	339.23	J/mol×K	553.88	Joback Method
cpg	322.63	J/mol×K	519.74	Joback Method
cpg	305.15	J/mol×K	485.59	Joback Method
cpg	384.04	J/mol×K	656.32	Joback Method
dvisc	0.0002319	Pa×s	451.45	Joback Method
dvisc	0.0003059	Pa×s	410.89	Joback Method
dvisc	0.0004288	Pa×s	370.34	Joback Method
dvisc	0.0006532	Pa×s	329.78	Joback Method
dvisc	0.0011194	Pa×s	289.23	Joback Method
dvisc	0.0022871	Pa×s	248.67	Joback Method
dvisc	0.0061732	Pa×s	208.12	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.44919e+01
Coeff. B	-3.71769e+03
Coeff. C	-6.34700e+01
Temperature range (K), min.	325.20
Temperature range (K), max.	468.43

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C500005&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

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
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

ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume