Cyclohexane, 1-methyl-4-(1-methylethyl)-, cis-

Other names:	1-Isopropyl-4-methyl-cyclohexane, cis
	1-Isopropyl-cis-4-methylcyclohexane
	1-Methyl-4-(1-methylethyl)-cyclohexane, cis
	1-Methyl-cis-4-isopropylcyclohexane
	cis-1-Isopropyl-4-methylcyclohexane
	cis-1-Methyl-4-isopropylcyclohexane
	cis-p-Menthane
	p-Menthane, Z-
	p-Menthane, cis-
Inchi:	InChI=1S/C10H20/c1-8(2)10-6-4-9(3)5-7-10/h8-10H,4-7H2,1-3H3/t9-,10+
InchiKey:	CFJYNSNXFXLKNS-AOOOYVTPSA-N
Formula:	C10H20
SMILES:	CC1CCC(C(C)C)CC1
Mol. weight [g/mol]:	140.27
CAS:	6069-98-3

Physical Properties

Property code	Value	Unit	Source
gf	47.62	kJ/mol	Joback Method
hf	-221.03	kJ/mol	Joback Method
hfus	11.04	kJ/mol	Joback Method
hvap	37.59	kJ/mol	Joback Method
log10ws	-3.18		Crippen Method
logp	3.469		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2505.01	kPa	Joback Method
rinpol	998.00		NIST Webbook
rinpol	973.00		NIST Webbook
rinpol	1027.00		NIST Webbook
rinpol	1018.00		NIST Webbook
rinpol	994.70		NIST Webbook
rinpol	1000.00		NIST Webbook
rinpol	984.00		NIST Webbook
rinpol	989.90		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	984.00		NIST Webbook
rinpol	989.00		NIST Webbook

rinpol	991.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	1000.00		NIST Webbook
rinpol	1011.00		NIST Webbook
ripol	1058.00		NIST Webbook
tb	445.92 ± 0.30	K	NIST Webbook
tc	643.71	K	Joback Method
tf	183.35 ± 0.04	K	NIST Webbook
tf	183.30 ± 0.06	K	NIST Webbook
tf	183.28 ± 0.09	K	NIST Webbook
vc	0.521	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	299.72	J/mol×K	442.64	Joback Method
cpg	320.07	J/mol×K	476.15	Joback Method
cpg	339.46	J/mol×K	509.66	Joback Method
cpg	357.93	J/mol×K	543.18	Joback Method
cpg	375.49	J/mol×K	576.69	Joback Method
cpg	392.17	J/mol×K	610.20	Joback Method
cpg	407.97	J/mol×K	643.71	Joback Method
dvisc	0.0082413	Pa×s	190.60	Joback Method
dvisc	0.0027291	Pa×s	232.61	Joback Method
dvisc	0.0012673	Pa×s	274.61	Joback Method
dvisc	0.0007213	Pa×s	316.62	Joback Method
dvisc	0.0004685	Pa×s	358.63	Joback Method
dvisc	0.0003331	Pa×s	400.63	Joback Method
dvisc	0.0002527	Pa×s	442.64	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	444.10	K	96.70	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.43549e+01
Coeff. B	-3.70979e+03
Coeff. C	-6.49020e+01
Temperature range (K), min.	328.62
Temperature range (K), max.	475.12

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=C6069983&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
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

tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume