Cyclohexane, 1-methyl-3-(1-methylethyl)-

Other names:	1-Isopropyl-3-methylcyclohexane
	m-Menthane
	3-Methyl-1-(1-methylethyl)cyclohexane
	Iso-m-menthane
Inchi:	InChI=1S/C10H20/c1-8(2)10-6-4-5-9(3)7-10/h8-10H,4-7H2,1-3H3
InchiKey:	QRDCBPPMQOPHOU-UHFFFAOYSA-N
Formula:	C10H20
SMILES:	CC1CCCC(C(C)C)C1
Mol. weight [g/mol]:	140.27
CAS:	16580-24-8

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	1009.00		NIST Webbook
rinpol	1037.00		NIST Webbook
rinpol	1037.00		NIST Webbook
rinpol	1009.00		NIST Webbook
tb	441.00 ± 5.00	K	NIST Webbook
tb	440.00 ± 5.00	K	NIST Webbook
tc	643.71	K	Joback Method
tf	190.60	K	Joback Method
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

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C16580248&Units=SI
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

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