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

Other names: 1-Isopropyl-4-methyl-cyclohexane, trans
1-Methyl-4-(1-methylethyl)-cyclohexane, trans
1-Methyl-trans-4-isopropylcyclohexane
Cyclohexane, 1-methyl-4-isopropyl, trans
p-Menthane E
p-Menthane, trans-
trans-1-Isopropyl-4-methylcyclohexane
trans-1-Methyl-4-isopropylcyclohexane
trans-p-Menthane

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-MGCOHNPYSA-N

Formula: C10H20

SMILES: CC(C)[C@H]1CC[C@H](C)CC1

Mol. weight [g/mol]: 140.27

CAS: 1678-82-6

Physical Properties

Property code	Value	Unit	Source
af	0.2626		Cheméo Relay (1.0)
gf	47.62	kJ/mol	Joback Method
hf	-188.21	kJ/mol	Cheméo Relay (1.0)
hfus	11.04	kJ/mol	Joback Method
hvap	45.01	kJ/mol	Cheméo Relay (1.0)
ie	9.32	eV	NIST Webbook
log10ws	-5.08		Cheméo Relay (1.0)
logp	3.469		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2505.01	kPa	Joback Method
rinpol	973.00		NIST Webbook
rinpol	973.00		NIST Webbook
rinpol	983.90		NIST Webbook
rinpol	1008.00		NIST Webbook
rinpol	1017.00		NIST Webbook
rinpol	997.00		NIST Webbook
rinpol	988.00		NIST Webbook
rinpol	997.00		NIST Webbook
rinpol	970.00		NIST Webbook

rinpol	1000.00		NIST Webbook
rinpol	970.00		NIST Webbook
rinpol	970.00		NIST Webbook
rinpol	999.00		NIST Webbook
rinpol	945.00		NIST Webbook
rinpol	979.00		NIST Webbook
rinpol	977.00		NIST Webbook
rinpol	978.00		NIST Webbook
rinpol	979.40		NIST Webbook
rinpol	973.00		NIST Webbook
rinpol	976.00		NIST Webbook
rinpol	982.00		NIST Webbook
rinpol	970.00		NIST Webbook
rinpol	945.00		NIST Webbook
rinpol	979.40		NIST Webbook
rinpol	988.00		NIST Webbook
ripol	1035.00		NIST Webbook
tb	443.80	K	NIST Webbook
tb	443.73 ± 0.30	K	NIST Webbook
tc	645.11	K	Cheméo Relay (1.0)
tf	186.78 ± 0.03	K	NIST Webbook
tf	186.80 ± 0.01	K	NIST Webbook
tf	186.79 ± 0.02	K	NIST Webbook
vc	0.528	m3/kmol	Cheméo Relay (1.0)

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

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.44114e+01
Coeff. B	-3.71437e+03
Coeff. C	-6.45120e+01
Temperature range (K), min.	327.50
Temperature range (K), max.	472.69

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1678826&Units=SI
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Cheméo Relay (1.0):	
Cheméo Relay (1.0, beta):	
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure

Legend

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