1,1,2,4-tetramethylcyclohexane, trans, cis

Other names: Cyclohexane, 1,1,2,4-tetramethyl, cis
Inchi: InChI=1S/C10H20/c1-8-5-6-10(3,4)9(2)7-8/h8-9H,5-7H2,1-4H3/t8-,9+/m0/s1
InchiKey: YPLGUQUVOXNUBM-DTWKUNHWSA-N
Formula: C10H20
SMILES: CC1CCC(C)(C)C(C)C1
Mol. weight [g/mol]: 140.27

Physical Properties

Property code	Value	Unit	Source
gf	36.86	kJ/mol	Joback Method
hf	-220.85	kJ/mol	Joback Method
hfus	9.33	kJ/mol	Joback Method
hvap	36.51	kJ/mol	Joback Method
log10ws	-3.18		Crippen Method
logp	3.469		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2515.07	kPa	Joback Method
rinpol	816.50		NIST Webbook
tb	438.65	K	Joback Method
tc	643.42	K	Joback Method
tf	225.26	K	Joback Method
vc	0.524	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	300.31	J/mol×K	438.65	Joback Method
cpg	321.00	J/mol×K	472.78	Joback Method
cpg	340.50	J/mol×K	506.91	Joback Method
cpg	358.88	J/mol×K	541.03	Joback Method
cpg	376.24	J/mol×K	575.16	Joback Method
cpg	392.65	J/mol×K	609.29	Joback Method
cpg	408.21	J/mol×K	643.42	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R141098&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
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

cpg:	Ideal gas heat capacity
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