1,2,4,5-tetramethylcyclohexane, trans

Inchi: InChI=1S/C10H20/c1-7-5-9(3)10(4)6-8(7)2/h7-10H,5-6H2,1-4H3/t7-,8-,9-,10-/m1/s1
InchiKey: VWWAILZUSKHANH-ZYUZMQFOSA-N
Formula: C10H20
SMILES: CC1CC(C)C(C)CC1C
Mol. weight [g/mol]: 140.27

Physical Properties

Property code	Value	Unit	Source
gf	34.64	kJ/mol	Joback Method
hf	-256.43	kJ/mol	Joback Method
hfus	16.70	kJ/mol	Joback Method
hvap	37.36	kJ/mol	Joback Method
log10ws	-2.94		Crippen Method
logp	3.325		Crippen Method
mcvol	140.900	ml/mol	McGowan Method
pc	2329.27	kPa	Joback Method
rinpol	1043.00		NIST Webbook
rinpol	1048.00		NIST Webbook
rinpol	1045.00		NIST Webbook
rinpol	1036.00		NIST Webbook
rinpol	1040.00		NIST Webbook
rinpol	1044.00		NIST Webbook
rinpol	1035.00		NIST Webbook
rinpol	1040.00		NIST Webbook
tb	433.74	K	Joback Method
tc	629.39	K	Joback Method
tf	197.12	K	Joback Method
vc	0.525	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	299.06	J/mol×K	433.74	Joback Method
cpg	319.44	J/mol×K	466.35	Joback Method

cpg	338.99	J/mol×K	498.96	Joback Method
cpg	357.72	J/mol×K	531.57	Joback Method
cpg	375.63	J/mol×K	564.17	Joback Method
cpg	392.74	J/mol×K	596.78	Joback Method
cpg	409.05	J/mol×K	629.39	Joback Method
dvisc	0.0014826	Pa×s	197.12	Joback Method
dvisc	0.0008678	Pa×s	236.56	Joback Method
dvisc	0.0005920	Pa×s	275.99	Joback Method
dvisc	0.0004444	Pa×s	315.43	Joback Method
dvisc	0.0003555	Pa×s	354.87	Joback Method
dvisc	0.0002974	Pa×s	394.30	Joback Method
dvisc	0.0002570	Pa×s	433.74	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=R138859&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
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