Cyclopentene, 1,2,3-trimethyl-

Other names: 1,2,3-Trimethylcyclopentene
Inchi: InChI=1S/C8H14/c1-6-4-5-7(2)8(6)3/h6H,4-5H2,1-3H3
InchiKey: YNEQKUWRFVQFPF-UHFFFAOYSA-N
Formula: C8H14
SMILES: CC1=C(C)C(C)CC1
Mol. weight [g/mol]: 110.20
CAS: 473-91-6

Physical Properties

Property code	Value	Unit	Source
chl	-5031.30	kJ/mol	NIST Webbook
gf	63.73	kJ/mol	Joback Method
hf	-113.13	kJ/mol	Joback Method
hfus	10.85	kJ/mol	Joback Method
hvap	35.28	kJ/mol	Joback Method
log10ws	-2.68		Crippen Method
logp	2.753		Crippen Method
mcvol	108.420	ml/mol	McGowan Method
pc	3086.42	kPa	Joback Method
tb	395.10 ± 0.40	K	NIST Webbook
tc	604.64	K	Joback Method
tf	216.62	K	Joback Method
vc	0.410	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	205.03	J/mol×K	406.84	Joback Method
cpg	219.22	J/mol×K	439.81	Joback Method
cpg	232.79	J/mol×K	472.77	Joback Method
cpg	245.74	J/mol×K	505.74	Joback Method
cpg	258.10	J/mol×K	538.71	Joback Method
cpg	269.88	J/mol×K	571.67	Joback Method
cpg	281.10	J/mol×K	604.64	Joback Method

dvisc	0.0013688	Pa×s	216.62	Joback Method
dvisc	0.0008662	Pa×s	248.32	Joback Method
dvisc	0.0006080	Pa×s	280.03	Joback Method
dvisc	0.0004586	Pa×s	311.73	Joback Method
dvisc	0.0003644	Pa×s	343.43	Joback Method
dvisc	0.0003011	Pa×s	375.14	Joback Method
dvisc	0.0002562	Pa×s	406.84	Joback Method

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.45798e+01
Coeff. B	-3.42884e+03
Coeff. C	-5.08900e+01
Temperature range (K), min.	290.80
Temperature range (K), max.	420.84

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C473916&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

Joback Method: https://en.wikipedia.org/wiki/Joback_method

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

Legend

chl: Standard liquid enthalpy of combustion

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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume