Vinylcyclopentane

Other names:	Cyclopentane, ethenyl-
	Cyclopentane, vinyl-
	Ethenylcyclopentane
	Cyclopentylethylene
Inchi:	InChI=1S/C7H12/c1-2-7-5-3-4-6-7/h2,7H,1,3-6H2
InchiKey:	BEFDCLMNVWHSGT-UHFFFAOYSA-N
Formula:	C7H12
SMILES:	C=CC1CCCC1
Mol. weight [g/mol]:	96.17
CAS:	3742-34-5

Physical Properties

Property code	Value	Unit	Source
chl	-4434.70 ± 1.00	kJ/mol	NIST Webbook
gf	132.45	kJ/mol	Joback Method
hf	-1.90	kJ/mol	Joback Method
hfl	-34.80 ± 1.10	kJ/mol	NIST Webbook
hfus	6.54	kJ/mol	Joback Method
hvap	30.76	kJ/mol	Joback Method
log10ws	-2.26		Crippen Method
logp	2.363		Crippen Method
mcvol	94.330	ml/mol	McGowan Method
pc	3594.25	kPa	Joback Method
rinpol	727.00		NIST Webbook
rinpol	737.00		NIST Webbook
rinpol	727.00		NIST Webbook
rinpol	722.00		NIST Webbook
rinpol	731.30		NIST Webbook
rinpol	738.00		NIST Webbook
rinpol	727.00		NIST Webbook
rinpol	716.00		NIST Webbook
rinpol	713.80		NIST Webbook
rinpol	710.00		NIST Webbook
rinpol	715.00		NIST Webbook
rinpol	719.00		NIST Webbook
rinpol	717.60		NIST Webbook
tb	372.32 ± 0.20	K	NIST Webbook

tb	373.50 ± 1.00	K	NIST Webbook
tb	400.23 ± 0.20	K	NIST Webbook
tb	372.32 ± 0.20	K	NIST Webbook
tb	372.31 ± 0.30	K	NIST Webbook
tb	372.32 ± 0.20	K	NIST Webbook
tb	372.32 ± 0.20	K	NIST Webbook
tb	370.20	K	NIST Webbook
tc	569.91	K	Joback Method
tf	147.07 ± 0.20	K	NIST Webbook
tf	146.67 ± 0.03	K	NIST Webbook
tf	146.65 ± 0.04	K	NIST Webbook
tf	147.09 ± 0.20	K	NIST Webbook
tf	147.34 ± 0.10	K	NIST Webbook
tf	146.65	K	NIST Webbook
tf	146.65 ± 0.10	K	NIST Webbook
tf	146.65 ± 0.04	K	NIST Webbook
tf	147.07 ± 0.15	K	NIST Webbook
tf	147.09 ± 0.10	K	NIST Webbook
tf	146.21 ± 0.10	K	NIST Webbook
tf	146.67 ± 0.04	K	NIST Webbook
vc	0.349	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	159.62	J/mol×K	371.52	Joback Method
cpg	174.33	J/mol×K	404.59	Joback Method
cpg	188.28	J/mol×K	437.65	Joback Method
cpg	201.49	J/mol×K	470.72	Joback Method
cpg	213.99	J/mol×K	503.78	Joback Method
cpg	225.81	J/mol×K	536.85	Joback Method
cpg	236.97	J/mol×K	569.91	Joback Method
dvisc	0.0031132	Pa×s	177.79	Joback Method
dvisc	0.0015385	Pa×s	210.08	Joback Method
dvisc	0.0009174	Pa×s	242.37	Joback Method
dvisc	0.0006178	Pa×s	274.65	Joback Method
dvisc	0.0004521	Pa×s	306.94	Joback Method
dvisc	0.0003511	Pa×s	339.23	Joback Method
dvisc	0.0002849	Pa×s	371.52	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C3742345&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

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
hfl:	Liquid phase 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