Cis-Cyclopenten-1,2-diol

Other names: cis-1,2-Cyclopentanediol
Inchi: InChI=1S/C5H10O2/c6-4-2-1-3-5(4)7/h4-7H,1-3H2/t4-,5+
InchiKey: VCVOSERVUCJNPR-SYDPRGILSA-N
Formula: C5H10O2
SMILES: OC1CCCC1O
Mol. weight [g/mol]: 102.13
CAS: 5057-98-7

Physical Properties

Property code	Value	Unit	Source
affp	885.60	kJ/mol	NIST Webbook
basg	853.10	kJ/mol	NIST Webbook
chs	-2911.60 ± 4.20	kJ/mol	NIST Webbook
chs	-2909.00 ± 0.54	kJ/mol	NIST Webbook
chs	-2912.00	kJ/mol	NIST Webbook
gf	-253.58	kJ/mol	Joback Method
hf	-410.85	kJ/mol	Joback Method
hfus	11.89	kJ/mol	Joback Method
hvap	60.03	kJ/mol	Joback Method
log10ws	-0.56		Crippen Method
logp	-0.108		Crippen Method
mcvol	82.190	ml/mol	McGowan Method
pc	5351.35	kPa	Joback Method
rinpol	160.00		NIST Webbook
rinpol	160.00		NIST Webbook
tb	508.77	K	Joback Method
tc	688.96	K	Joback Method
tf	274.41	K	Joback Method
vc	0.293	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	197.91	J/mol×K	508.77	Joback Method

cpg	207.46	J/mol×K	538.80	Joback Method
cpg	216.56	J/mol×K	568.83	Joback Method
cpg	225.21	J/mol×K	598.86	Joback Method
cpg	233.43	J/mol×K	628.90	Joback Method
cpg	241.23	J/mol×K	658.93	Joback Method
cpg	248.63	J/mol×K	688.96	Joback Method
dvisc	0.0881188	Pa×s	274.41	Joback Method
dvisc	0.0151075	Pa×s	313.47	Joback Method
dvisc	0.0038285	Pa×s	352.53	Joback Method
dvisc	0.0012759	Pa×s	391.59	Joback Method
dvisc	0.0005190	Pa×s	430.65	Joback Method
dvisc	0.0002452	Pa×s	469.71	Joback Method
dvisc	0.0001300	Pa×s	508.77	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	381.70	K	2.70	NIST Webbook
tbrp	397.20	K	3.90	NIST Webbook

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C5057987&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

affp: Proton affinity
basg: Gas basicity
chs: Standard solid 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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume