1,2-Cyclopentanediol, trans-

Other names:	trans-1,2-Cyclopentanediol
	trans-cyclopentane-1,2-diol
Inchi:	InChI=1S/C5H10O2/c6-4-2-1-3-5(4)7/h4-7H,1-3H2/t4-,5-/m0/s1
InchiKey:	VCVOSERVUCJNPR-WHFBIAKZSA-N
Formula:	C5H10O2
SMILES:	OC1CCCC1O
Mol. weight [g/mol]:	102.13
CAS:	5057-99-8

Physical Properties

Property code	Value	Unit	Source
chs	-2906.60 ± 2.90	kJ/mol	NIST Webbook
chs	-2901.00 ± 0.40	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
tb	508.77	K	Joback Method
tc	688.96	K	Joback Method
tf	319.00 ± 4.00	K	NIST Webbook
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	409.20	K	2.90	NIST Webbook

Sources

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
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C5057998&Units=SI

Legend

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