1,5-Anhydro-2,3,4,6-tetra-O-methyl-D-glucitol

Inchi: InChI=1S/C10H20O5/c1-11-5-8-10(14-4)9(13-3)7(12-2)6-15-8/h7-10H,5-6H2,1-4H3/t7-,8
InchiKey: SQOPNOVHKFZFPJ-IMSYWVGJSA-N
Formula: C10H20O5
SMILES: COCC1OCC(OC)C(OC)C1OC
Mol. weight [g/mol]: 220.26
CAS: 81874-02-4

Physical Properties

Property code	Value	Unit	Source
gf	-471.48	kJ/mol	Joback Method
hf	-917.31	kJ/mol	Joback Method
hfus	29.44	kJ/mol	Joback Method
hvap	51.51	kJ/mol	Joback Method
log10ws	0.21		Crippen Method
logp	0.077		Crippen Method
mcvol	170.250	ml/mol	McGowan Method
pc	2165.35	kPa	Joback Method
rinpol	1363.28		NIST Webbook
rinpol	1363.28		NIST Webbook
tb	550.37	K	Joback Method
tc	740.59	K	Joback Method
tf	312.61	K	Joback Method
vc	0.619	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	447.39	J/mol×K	550.37	Joback Method
cpg	465.74	J/mol×K	582.07	Joback Method
cpg	483.46	J/mol×K	613.78	Joback Method
cpg	500.50	J/mol×K	645.48	Joback Method
cpg	516.82	J/mol×K	677.18	Joback Method
cpg	532.40	J/mol×K	708.89	Joback Method
cpg	547.18	J/mol×K	740.59	Joback Method

dvisc	0.0010494	Pa×s	312.61	Joback Method
dvisc	0.0006459	Pa×s	352.24	Joback Method
dvisc	0.0004386	Pa×s	391.86	Joback Method
dvisc	0.0003197	Pa×s	431.49	Joback Method
dvisc	0.0002458	Pa×s	471.12	Joback Method
dvisc	0.0001969	Pa×s	510.74	Joback Method
dvisc	0.0001628	Pa×s	550.37	Joback Method

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=C81874024&Units=SI

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

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