Propanal, 2,3-dihydroxy-, (S)-

Other names:	L-Glyceraldehyde
	L-(-)-glyceraldehyde
Inchi:	InChI=1S/C3H6O3/c4-1-3(6)2-5/h1,3,5-6H,2H2/t3-/m0/s1
InchiKey:	MNQZXJOMYWMBOU-VKHMYHEASA-N
Formula:	C3H6O3
SMILES:	O=CC(O)CO
Mol. weight [g/mol]:	90.08
CAS:	497-09-6

Physical Properties

Property code	Value	Unit	Source
chl	-1769.90	kJ/mol	NIST Webbook
chs	-1410.00	kJ/mol	NIST Webbook
gf	-401.22	kJ/mol	Joback Method
hf	-500.57	kJ/mol	Joback Method
hfus	10.47	kJ/mol	Joback Method
hvap	61.96	kJ/mol	Joback Method
log10ws	1.00		Crippen Method
logp	-1.462		Crippen Method
mcvol	66.440	ml/mol	McGowan Method
pc	6503.64	kPa	Joback Method
tb	500.62	K	Joback Method
tc	668.71	K	Joback Method
tf	272.21	K	Joback Method
vc	0.253	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	145.26	J/mol×K	500.62	Joback Method
cpg	166.80	J/mol×K	640.70	Joback Method
cpg	162.88	J/mol×K	612.68	Joback Method
cpg	158.77	J/mol×K	584.67	Joback Method
cpg	154.47	J/mol×K	556.65	Joback Method

cpg	149.96	J/mol×K	528.64	Joback Method
cpg	170.54	J/mol×K	668.71	Joback Method
dvisc	0.0001203	Pa×s	500.62	Joback Method
dvisc	0.0002424	Pa×s	462.55	Joback Method
dvisc	0.0005539	Pa×s	424.48	Joback Method
dvisc	0.0014895	Pa×s	386.42	Joback Method
dvisc	0.0049726	Pa×s	348.35	Joback Method
dvisc	0.0223150	Pa×s	310.28	Joback Method
dvisc	0.1523958	Pa×s	272.21	Joback Method

Sources

McGowan Method: http://link.springer.com/article/10.1007/BF02311772
NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C497096&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
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
tc: Critical Temperature
tf: Normal melting (fusion) point
vc: Critical Volume

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