dl-Homoserine

Other names:	Butyric acid, 2-amino-4-hydroxy-, DL- DL-2-amino-4-hydroxybutanoic acid DL-2-amino-4-hydroxybutyric acid butanoic acid, 2-amino-4-hydroxy-, DL-
Inchi:	InChI=1S/C4H9NO3/c5-3(1-2-6)4(7)8/h3,6H,1-2,5H2,(H,7,8)
InchiKey:	UKAUYVFTDYCKQA-UHFFFAOYSA-N
Formula:	C4H9NO3
SMILES:	NC(CCO)C(=O)O
Mol. weight [g/mol]:	119.12
CAS:	1927-25-9

Physical Properties

Property code	Value	Unit	Source
gf	-355.75	kJ/mol	Joback Method
hf	-514.42	kJ/mol	Joback Method
hfus	17.57	kJ/mol	Joback Method
hvap	74.86	kJ/mol	Joback Method
log10ws	0.59		Crippen Method
logp	-1.219		Crippen Method
mcvol	90.510	ml/mol	McGowan Method
pc	6009.25	kPa	Joback Method
tb	601.24	K	Joback Method
tc	781.47	K	Joback Method
tf	374.67	K	Joback Method
vc	0.327	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	227.94	J/mol×K	601.24	Joback Method
cpg	234.21	J/mol×K	631.28	Joback Method
cpg	240.18	J/mol×K	661.32	Joback Method
cpg	245.83	J/mol×K	691.36	Joback Method
cpg	251.20	J/mol×K	721.39	Joback Method

cpg	256.27	J/mol×K	751.43	Joback Method
cpg	261.07	J/mol×K	781.47	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C1927259&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Effects of hydroxyl groups on binary diffusion coefficients of -amino acids in dilute aqueous solutions:	https://www.doi.org/10.1016/j.fluid.2007.10.013
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

Legend

cpg:	Ideal gas heat capacity
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