Hydroxyproline

Other names: (2S,4R)-4-hydroxypyrrolidine-2-carboxylic acid
4-Hydroxy-2-pyrrolidinecarboxylic acid
4-Hydroxy-L-proline
4-Hydroxyproline
4-L-Hydroxyproline
Hydroxy-L-Proline
Hydroxyproline, (L)-
Hypro
L-4-Hydroxyproline
L-Hydroxyproline
L-Proline, 4-hydroxy-, (4R)-
L-Proline, 4-hydroxy-, trans-
Ls-Hydroxyproline
NSC 46704
Proline, 4-hydroxy-
Proline, 4-hydroxy-, L-
trans-4-Hydroxy-L-Proline
trans-4-Hydroxyproline
trans-Hydroxyproline
trans-L-4-hydroxyproline
trans-L-Hydroxyproline
«delta»-Hydroxyproline

Inchi: InChI=1S/C5H9NO3/c7-3-1-4(5(8)9)6-2-3/h3-4,6-7H,1-2H2,(H,8,9)/t3?,4-/m1/s1
InchiKey: PMMYEEVYMWASQN-SRBOSORUSA-N
Formula: C5H9NO3
SMILES: O=C(O)C1CC(O)CN1
Mol. weight [g/mol]: 131.13
CAS: 51-35-4

Physical Properties

Property code	Value	Unit	Source
gf	-294.79	kJ/mol	Joback Method
hf	-485.62	kJ/mol	Joback Method
hfus	23.08	kJ/mol	Joback Method
hvap	73.53	kJ/mol	Joback Method
log10ws	0.41		Crippen Method

logp	-1.206		Crippen Method
mcvol	93.740	ml/mol	McGowan Method
pc	6113.06	kPa	Joback Method
tb	611.19	K	Joback Method
tc	804.48	K	Joback Method
tf	429.37	K	Joback Method
vc	0.337	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	247.66	J/mol×K	611.19	Joback Method
cpg	256.55	J/mol×K	643.40	Joback Method
cpg	264.97	J/mol×K	675.62	Joback Method
cpg	272.92	J/mol×K	707.83	Joback Method
cpg	280.40	J/mol×K	740.05	Joback Method
cpg	287.43	J/mol×K	772.26	Joback Method
cpg	294.02	J/mol×K	804.48	Joback Method

Sources

Thermodynamic properties of aqueous 4-hydroxyproline at different temperatures:	https://www.doi.org/10.1016/j.jct.2009.11.017
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=C51354&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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