

L-Glutamic acid

Other names:	(2S)-2-Aminopentanedioic acid (S)-(+)-Glutamic acid (S)-.alpha.-aminoglutaric acid (S)-2-Aminopentanedioic acid (S)-Glutamic acid .alpha.-glutamic acid 1-Aminopropane-1,3-dicarboxylic acid 2-Aminoglutaric acid 2-Aminopentanedioic acid Aciglut D-Glutamiensuur Glusate Glutacid Glutamic acid Glutamic acid, L- GlutamicoL Glutamidex Glutaminic acid Glutaminol Glutaton L (+)-glutamic acid, alpha-form L-(+)-Glutamic acid L-.alpha.-aminoglutaric acid L-2-aminoglutaric acid L-2-aminopentanedioic acid L-Glutaminic acid NSC 143503 Pantanedioic acid, 2-amino-, (S)- «alpha»-Aminoglutaric acid «alpha»-Glutamic acid Â«alphaÂ»-Aminoglutaric acid Â«alphaÂ»-Glutamic acid
Inchi:	InChI=1S/C5H9NO4/c6-3(5(9)10)1-2-4(7)8/h3H,1-2,6H2,(H,7,8)(H,9,10)/t3-/m1/s1
InchiKey:	WHUUTDBJXJRKMKGSOUGTGSA-N
Formula:	C5H9NO4
SMILES:	NC(CCC(=O)O)C(=O)O
Mol. weight [g/mol]:	147.13
CAS:	56-86-0

Physical Properties

Property code	Value	Unit	Source
affp	913.00	kJ/mol	NIST Webbook
affp	981.80 ± 9.90	kJ/mol	NIST Webbook
basg	921.00 ± 11.00	kJ/mol	NIST Webbook
basg	879.10	kJ/mol	NIST Webbook
chs	-2244.10 ± 0.75	kJ/mol	NIST Webbook
chs	-2250.47 ± 0.93	kJ/mol	NIST Webbook
chs	-2248.50 ± 1.20	kJ/mol	NIST Webbook
chs	-2253.40	kJ/mol	NIST Webbook
chs	-2275.70	kJ/mol	NIST Webbook
ep	-95.00 ± 16.00	J/mol×K	NIST Webbook
gf	-476.25	kJ/mol	Joback Method
hf	-647.64	kJ/mol	Joback Method
hfs	-1003.30 ± 1.20	kJ/mol	NIST Webbook
hfs	-1005.20 ± 1.20	kJ/mol	NIST Webbook
hfus	21.75	kJ/mol	Joback Method
hvap	83.83	kJ/mol	Joback Method
log10ws	0.34		Crippen Method
logp	-0.737		Crippen Method
mcvol	106.170	ml/mol	McGowan Method
pc	5713.21	kPa	Joback Method
ss	188.20	J/mol×K	NIST Webbook
tb	677.99	K	Joback Method
tc	864.26	K	Joback Method
tf	435.87	K	Joback Method
vc	0.389	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	279.71	J/mol×K	677.99	Joback Method
cpg	286.05	J/mol×K	709.03	Joback Method
cpg	292.03	J/mol×K	740.08	Joback Method
cpg	297.65	J/mol×K	771.12	Joback Method
cpg	302.93	J/mol×K	802.17	Joback Method
cpg	307.87	J/mol×K	833.21	Joback Method
cpg	312.49	J/mol×K	864.26	Joback Method

cps	175.08	J/mol×K	298.00	NIST Webbook
cps	175.06	J/mol×K	298.15	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	$\ln(P_{\text{vp}}) = A + B/(T + C)$
Coeff. A	3.70227e+01
Coeff. B	-1.26929e+04
Coeff. C	-1.48662e+02
Temperature range (K), min.	494.19
Temperature range (K), max.	548.93

Sources

Legend

affp:	Proton affinity
basg:	Gas basicity
chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
cps:	Solid phase heat capacity
ep:	Protonation entropy at 298K
gf:	Standard Gibbs free energy of formation
hf:	Enthalpy of formation at standard conditions
hfs:	Solid phase 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
pvap:	Vapor pressure
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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