

# D-Serine

<b>Other names:</b>	(S)-(+)-serine (S)-2-amino-3-hydroxypropanoic acid (S)-serine .alpha.-amino-.beta.-hydroxypropionic acid .beta.-hydroxyalanine L-serine Serine, D-
<b>Inchi:</b>	InChI=1S/C3H7NO3/c4-2(1-5)3(6)7/h2,5H,1,4H2,(H,6,7)/t2-/m0/s1
<b>InchiKey:</b>	MTCFGRXMJLQNBG-REOHCLBHSA-N
<b>Formula:</b>	C3H7NO3
<b>SMILES:</b>	NC(CO)C(=O)O
<b>Mol. weight [g/mol]:</b>	105.09
<b>CAS:</b>	312-84-5

## Physical Properties

Property code	Value	Unit	Source
gf	-364.17	kJ/mol	Joback Method
hf	-493.78	kJ/mol	Joback Method
hfus	14.97	kJ/mol	Joback Method
hvap	72.63	kJ/mol	Joback Method
log10ws	1.01		Crippen Method
logp	-1.609		Crippen Method
mvol	76.420	ml/mol	McGowan Method
pc	7014.41	kPa	Joback Method
tb	578.36	K	Joback Method
tc	760.22	K	Joback Method
tf	363.40	K	Joback Method
tt	498.15	K	The Research and Measurement about the Solubility of L-Serine in Eight Common Pure Solvents and Four Binary Mixed Solvents for T = (278.15-333.15) K
vc	0.271	m <sup>3</sup> /kmol	Joback Method

# Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	184.80	J/molxK	578.36	Joback Method
cpg	190.08	J/molxK	608.67	Joback Method
cpg	195.08	J/molxK	638.98	Joback Method
cpg	199.83	J/molxK	669.29	Joback Method
cpg	204.33	J/molxK	699.60	Joback Method
cpg	208.59	J/molxK	729.91	Joback Method
cpg	212.60	J/molxK	760.22	Joback Method
hvapt	141.00	kJ/mol	454.00	Enthalpy of sublimation of hydroxyl-containing amino acids: Knudsen's effusion mass spectrometric study

## Sources

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## 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
hvapt:	Enthalpy of vaporization at a given temperature
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
tt:	Triple Point Temperature
vc:	Critical Volume

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