D-Valine

Other names:	(R)-Valine
	(S)-(+)-valine
	(S)-3-amino-2-methylbutanoic acid
	(S)-Valine
	2-Amino-3-methylbutanoic acid(D)
	L-2-amino-3-methylbutanoic acid
	L-2-amino-3-methylbutyric acid
	L-2-aminoisovaleric acid
	L-valine
	NSC 20654
	Valine, D-
	butanoic acid, 2-amino-3-methyl-, (S)-
Inchi:	InChI=1S/C5H11NO2/c1-3(2)4(6)5(7)8/h3-4H,6H2,1-2H3,(H,7,8)/t4-/m0/s1
InchiKey:	KZSNJWFQEVHDMF-BYPYZUCNSA-N
Formula:	C5H11NO2
SMILES:	CC(C)C(N)C(=O)O
Mol. weight [g/mol]:	117.15
CAS:	640-68-6

Physical Properties

Property code	Value	Unit	Source
gf	-212.95	kJ/mol	Joback Method
hf	-388.11	kJ/mol	Joback Method
hfus	12.54	kJ/mol	Joback Method
hvap	60.01	kJ/mol	Joback Method
log10ws	-0.32		Crippen Method
logp	0.054		Crippen Method
mcvol	98.730	ml/mol	McGowan Method
pc	4627.70	kPa	Joback Method
tb	531.50	K	Joback Method
tc	722.61	K	Joback Method
tf	310.12	K	Joback Method
vc	0.357	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	232.36	J/mol×K	531.50	Joback Method
cpg	241.05	J/mol×K	563.35	Joback Method
cpg	249.30	J/mol×K	595.20	Joback Method
cpg	257.14	J/mol×K	627.06	Joback Method
cpg	264.58	J/mol×K	658.91	Joback Method
cpg	271.63	J/mol×K	690.76	Joback Method
cpg	278.30	J/mol×K	722.61	Joback Method
cps	158.00	J/mol×K	298.00	NIST Webbook
cps	158.20	J/mol×K	298.00	NIST Webbook

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Legend

cpg:	Ideal gas heat capacity
cps:	Solid phase 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