

D-(+)-Ribonic acid «gamma»-lactone

Other names:	D-Ribonic acid, «gamma»-lactone «gamma»-Lactone of ribonic acid D-Ribono-«gamma»-lactone D-Ribono-1,4-lactone D-Ribonolactone D-Ribopentono-1,4-lactone Ribonic acid, «gamma»-lactone, D- Ribono-«gamma»-lactone D-(+)-Ribonic acid gamma-lactone NSC 1031
Inchi:	InChI=1S/C5H8O5/c6-1-2-3(7)4(8)5(9)10-2/h2-4,6-8H,1H2
InchiKey:	CUOKHACJLGPRHD-UHFFFAOYSA-N
Formula:	C5H8O5
SMILES:	O=C1OC(CO)C(O)C1O
Mol. weight [g/mol]:	148.11
CAS:	5336-08-3

Physical Properties

Property code	Value	Unit	Source
chs	-2100.12 ± 0.93	kJ/mol	NIST Webbook
gf	-606.82	kJ/mol	Joback Method
hf	-853.12	kJ/mol	Joback Method
hfs	-1010.80 ± 1.10	kJ/mol	NIST Webbook
hfus	24.54	kJ/mol	Joback Method
hvap	85.16	kJ/mol	Joback Method
log10ws	1.20		Crippen Method
logp	-2.374		Crippen Method
mcvol	95.500	ml/mol	McGowan Method
pc	6084.49	kPa	Joback Method
tb	691.05	K	Joback Method
tc	875.76	K	Joback Method
tf	425.78	K	Joback Method
vc	0.340	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	289.79	J/mol×K	691.05	Joback Method
cpg	297.74	J/mol×K	721.84	Joback Method
cpg	305.26	J/mol×K	752.62	Joback Method
cpg	312.33	J/mol×K	783.41	Joback Method
cpg	318.95	J/mol×K	814.19	Joback Method
cpg	325.10	J/mol×K	844.98	Joback Method
cpg	330.76	J/mol×K	875.76	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
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=C5336083&Units=SI

Legend

chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
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
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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