D-erythro-Pentose, 2-deoxy-

Other names:	D-Ribose, 2-deoxy-
	D-2-Deoxyribose
	Deoxyribose
	Ribose, 2-deoxy-, D-
	Thyminose
	2-Deoxy-D-erythro-pentose
	2-Deoxy-D-ribose
	D-2-Desoxyribose
	2-Deoxyribose
	2-Deoxy-D-arabinose
	2-Desoxy ribose
Inchi:	InChI=1S/C5H10O4/c6-2-1-4(8)5(9)3-7/h2,4-5,7-9H,1,3H2
InchiKey:	ASJSAQIRZKANQN-UHFFFAOYSA-N
Formula:	C5H10O4
SMILES:	O=CCC(O)C(O)CO
Mol. weight [g/mol]:	134.13
CAS:	533-67-5

Physical Properties

Property code	Value	Unit	Source
chs	-2527.39 ± 0.98	kJ/mol	NIST Webbook
gf	-523.64	kJ/mol	Joback Method
hf	-699.36	kJ/mol	Joback Method
hfs	-869.30 ± 1.70	kJ/mol	NIST Webbook
hfus	16.21	kJ/mol	Joback Method
hvap	82.70	kJ/mol	Joback Method
log10ws	0.79		Crippen Method
logp	-1.710		Crippen Method
mcvol	100.490	ml/mol	McGowan Method
pc	5636.27	kPa	Joback Method
tb	638.12	K	Joback Method
tc	803.89	K	Joback Method
tf	340.57	K	Joback Method
vc	0.378	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	265.56	J/mol×K	638.12	Joback Method
cpg	271.65	J/mol×K	665.75	Joback Method
cpg	277.45	J/mol×K	693.38	Joback Method
cpg	282.97	J/mol×K	721.00	Joback Method
cpg	288.22	J/mol×K	748.63	Joback Method
cpg	293.21	J/mol×K	776.26	Joback Method
cpg	297.95	J/mol×K	803.89	Joback Method
dvisc	0.0506865	Pa×s	340.57	Joback Method
dvisc	0.0049960	Pa×s	390.16	Joback Method
dvisc	0.0008305	Pa×s	439.75	Joback Method
dvisc	0.0001986	Pa×s	489.35	Joback Method
dvisc	0.0000618	Pa×s	538.94	Joback Method
dvisc	0.0000234	Pa×s	588.53	Joback Method
dvisc	0.0000103	Pa×s	638.12	Joback Method

Sources

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=C533675&Units=SI
Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

chs: Standard solid enthalpy of combustion
cpg: Ideal gas heat capacity
dvisc: Dynamic viscosity
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