

«alpha»-d-Xylofuranose

Other names:	«alpha»-d-Xylose «alpha»-D-Xylopyranose Xylose
Inchi:	InChI=1S/C5H10O5/c6-1-2-3(7)4(8)5(9)10-2/h2-9H,1H2/t2-,3+,4-,5+/m0/s1
InchiKey:	HMFHBZSHGGEWLO-SKNVOMKLSA-N
Formula:	C5H10O5
SMILES:	OCC1OC(O)C(O)C1O
Mol. weight [g/mol]:	150.13
CAS:	31178-70-8

Physical Properties

Property code	Value	Unit	Source
chs	-2338.90 ± 0.84	kJ/mol	NIST Webbook
gf	-628.76	kJ/mol	Joback Method
hf	-887.99	kJ/mol	Joback Method
hfus	30.19	kJ/mol	Joback Method
hvap	97.28	kJ/mol	Joback Method
log10ws	1.11		Crippen Method
logp	-2.582		Crippen Method
mcvol	99.800	ml/mol	McGowan Method
pc	6318.86	kPa	Joback Method
tb	710.74	K	Joback Method
tc	882.89	K	Joback Method
tf	414.14	K	Joback Method
vc	0.350	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	318.01	J/molxK	710.74	Joback Method
cpg	350.98	J/molxK	854.20	Joback Method
cpg	345.16	J/molxK	825.51	Joback Method
cpg	338.96	J/molxK	796.82	Joback Method
cpg	332.37	J/molxK	768.12	Joback Method

cpg	325.39	J/mol×K	739.43	Joback Method
cpg	356.42	J/mol×K	882.89	Joback Method
dvisc	0.0000032	Paxs	710.74	Joback Method
dvisc	0.0000068	Paxs	661.31	Joback Method
dvisc	0.0000161	Paxs	611.87	Joback Method
dvisc	0.0000443	Paxs	562.44	Joback Method
dvisc	0.0001484	Paxs	513.01	Joback Method
dvisc	0.0006431	Paxs	463.57	Joback Method
dvisc	0.0039546	Paxs	414.14	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=C31178708&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071

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
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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