«alpha»-D-Glucopyranose

Other names:	alpha-D-Glucose
	«alpha»-D-Glucose
Inchi:	InChI=1S/C6H12O6/c7-1-2-3(8)4(9)5(10)6(11)12-2/h2-11H,1H2/t2-,3-,4+,5-,6+/m0/s1
InchiKey:	WQZGKKKJIJFFOK-MDMQIMBFSA-N
Formula:	C6H12O6
SMILES:	OCC1OC(O)C(O)C(O)C1O
Mol. weight [g/mol]:	180.16
CAS:	26655-34-5

Physical Properties

Property code	Value	Unit	Source
basg	778.90	kJ/mol	NIST Webbook
chs	-2801.50	kJ/mol	NIST Webbook
chs	-2803.30 ± 0.42	kJ/mol	NIST Webbook
chs	-2799.80 ± 2.30	kJ/mol	NIST Webbook
gf	-776.97	kJ/mol	Joback Method
hf	-1087.36	kJ/mol	Joback Method
hfs	-1274.50	kJ/mol	NIST Webbook
hfus	35.83	kJ/mol	Joback Method
hvap	116.05	kJ/mol	Joback Method
log10ws	1.31		Crippen Method
logp	-3.221		Crippen Method
mcvol	119.760	ml/mol	McGowan Method
pc	6200.01	kPa	Joback Method
tb	825.40	K	Joback Method
tc	1011.14	K	Joback Method
tf	478.47	K	Joback Method
vc	0.416	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	418.13	J/mol×K	825.40	Joback Method
cpg	450.39	J/mol×K	980.18	Joback Method

cpg	445.12	J/mol×K	949.22	Joback Method
cpg	439.26	J/mol×K	918.27	Joback Method
cpg	432.81	J/mol×K	887.31	Joback Method
cpg	425.76	J/mol×K	856.36	Joback Method
cpg	455.08	J/mol×K	1011.14	Joback Method
dvisc	0.0000002	Pa×s	825.40	Joback Method
dvisc	0.0000004	Pa×s	767.58	Joback Method
dvisc	0.0000011	Pa×s	709.76	Joback Method
dvisc	0.0000032	Pa×s	651.93	Joback Method
dvisc	0.0000121	Pa×s	594.11	Joback Method
dvisc	0.0000602	Pa×s	536.29	Joback Method
dvisc	0.0004404	Pa×s	478.47	Joback Method

Sources

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=C26655345&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

Legend

basg:	Gas basicity
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