

Saccharic acid

Other names:	D-glucaric acid
Inchi:	InChI=1S/C6H10O8/c7-1(3(9)5(11)12)2(8)4(10)6(13)14/h1-4,7-10H,(H,11,12)(H,13,14)/t1
InchiKey:	DSLZVSRJTYRBFB-LLEIAEIESA-N
Formula:	C6H10O8
SMILES:	O=C(O)C(O)C(O)C(O)C(O)C(=O)O
Mol. weight [g/mol]:	210.14
CAS:	87-73-0

Physical Properties

Property code	Value	Unit	Source
gf	-1088.88	kJ/mol	Joback Method
hf	-1326.83	kJ/mol	Joback Method
hfus	24.93	kJ/mol	Joback Method
hvap	140.96	kJ/mol	Joback Method
log10ws	1.97		Crippen Method
logp	-3.401		Crippen Method
mcvol	133.760	ml/mol	McGowan Method
pc	8510.23	kPa	Joback Method
tb	995.74	K	Joback Method
tc	1235.33	K	Joback Method
tf	562.16	K	Joback Method
vc	0.473	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	420.57	J/mol×K	995.74	Joback Method
cpg	425.22	J/mol×K	1035.67	Joback Method
cpg	429.37	J/mol×K	1075.60	Joback Method
cpg	433.08	J/mol×K	1115.53	Joback Method
cpg	436.37	J/mol×K	1155.47	Joback Method
cpg	439.29	J/mol×K	1195.40	Joback Method
cpg	441.88	J/mol×K	1235.33	Joback Method
dvisc	0.0000152	Pa×s	562.16	Joback Method

dvisc	0.0000014	Pa×s	634.42	Joback Method
dvisc	0.0000002	Pa×s	706.69	Joback Method
dvisc	4.3406712e-08	Pa×s	778.95	Joback Method
dvisc	1.1948342e-08	Pa×s	851.21	Joback Method
dvisc	4.0247507e-09	Pa×s	923.48	Joback Method
dvisc	1.5876738e-09	Pa×s	995.74	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=C87730&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

Legend

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
mccvol:	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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