

Mucic acid

Other names:

Galactaric-acid-
Galactaric acid, D-
Galactosaccharic acid
Saccharolactic acid
Schleimsaure
Tetrahydroxyadipic 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)/t

InchiKey:

DSLZVSRJTYRBFB-DUHBMQHGSA-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:

526-99-8

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	m ³ /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/molxK	1115.53	Joback Method
cpg	436.37	J/molxK	1155.47	Joback Method
cpg	439.29	J/molxK	1195.40	Joback Method
cpg	441.88	J/molxK	1235.33	Joback Method
dvisc	0.0000152	Paxs	562.16	Joback Method
dvisc	0.0000014	Paxs	634.42	Joback Method
dvisc	0.0000002	Paxs	706.69	Joback Method
dvisc	4.3406712e-08	Paxs	778.95	Joback Method
dvisc	1.1948342e-08	Paxs	851.21	Joback Method
dvisc	4.0247507e-09	Paxs	923.48	Joback Method
dvisc	1.5876738e-09	Paxs	995.74	Joback Method

Sources

NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C526998&Units=SI
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

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
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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