Galactitol

Other names:	D-Dulcitol
	Euonymit
	Melampyrin
	Melampyrit
	Melampyrite
	Melampyrum
	NSC 1944
	dulcite
	dulcitol
	dulcose
Inchi:	InChI=1S/C6H14O6/c7-1-3(9)5(11)6(12)4(10)2-8/h3-12H,1-2H2/t3-,4+,5+,6-
InchiKey:	FBPFZTCFMRRESA-GUCUJZIJSA-N
Formula:	C6H14O6
SMILES:	OCC(O)C(O)C(O)C(O)CO
Mol. weight [g/mol]:	182.17
CAS:	608-66-2

Physical Properties

Property code	Value	Unit	Source
chs	-3015.10 ± 1.80	kJ/mol	NIST Webbook
chs	-3015.00 ± 2.00	kJ/mol	NIST Webbook
chs	-3045.70	kJ/mol	NIST Webbook
chs	-3015.30	kJ/mol	NIST Webbook
gf	-831.04	kJ/mol	Joback Method
hf	-1101.67	kJ/mol	Joback Method
hfs	-1346.80 ± 0.79	kJ/mol	NIST Webbook
hfs	-1347.00	kJ/mol	NIST Webbook
hfus	21.73	kJ/mol	Joback Method
hsub	205.00	kJ/mol	NIST Webbook
hvap	127.47	kJ/mol	Joback Method
log10ws	1.64		Crippen Method
logp	-3.585		Crippen Method
mcvol	130.620	ml/mol	McGowan Method
pc	6830.13	kPa	Joback Method
ss	234.30	J/mol×K	NIST Webbook
ss	247.70	J/mol×K	NIST Webbook
tb	888.00	K	Joback Method

tc	1092.90	K	Joback Method
tf	460.30 ± 0.20	K	NIST Webbook
vc	0.462	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	456.45	J/mol×K	1092.90	Joback Method
cpg	451.78	J/mol×K	1058.75	Joback Method
cpg	446.82	J/mol×K	1024.60	Joback Method
cpg	441.54	J/mol×K	990.45	Joback Method
cpg	435.91	J/mol×K	956.30	Joback Method
cpg	429.90	J/mol×K	922.15	Joback Method
cpg	423.48	J/mol×K	888.00	Joback Method
cps	238.50	J/mol×K	292.80	NIST Webbook
dvisc	5.1362493e-08	Pa×s	746.10	Joback Method
dvisc	0.0000003	Pa×s	675.15	Joback Method
dvisc	4.5232902e-09	Pa×s	888.00	Joback Method
dvisc	0.0000222	Pa×s	533.25	Joback Method
dvisc	0.0005812	Pa×s	462.30	Joback Method
dvisc	1.3716255e-08	Pa×s	817.05	Joback Method
dvisc	0.0000018	Pa×s	604.20	Joback Method
hfust	65.10	kJ/mol	460.30	NIST Webbook
hfust	65.10	kJ/mol	460.30	NIST Webbook
hfust	65.10	kJ/mol	460.30	NIST Webbook
hvapt	133.80 ± 1.40	kJ/mol	480.00	NIST Webbook
sfust	141.40	J/mol×K	460.30	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	550.70	K	0.10	NIST Webbook

Sources

Influence of NH4Br on Solvation Behavior of Polyhydroxy Solutes in Aqueous Solutions at Different Temperatures:	https://www.doi.org/10.1021/je500886a
Densities and Viscosities of Polyhydroxy Solutes in Aqueous Solutions at Different Temperatures and Atmospheric Pressure:	https://www.doi.org/10.1021/acs.jced.5b00940
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Joback Method:	https://en.wikipedia.org/wiki/Joback_method
Apparent molar volumes and apparent molar heat capacities of aqueous additol, dulcitol, glycerol, meso-erythritol, myo-inositol, D-sorbitol, and xylitol at temperatures from (278.15 to 368.15) K and at the pressure 0.35 MPa:	https://www.doi.org/10.1016/j.jct.2006.08.009
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C608662&Units=SI
Investigations to explore interactions in (polyhydroxy solute + L-ascorbic acid + H2O) solutions at different temperatures: Calorimetric and viscometric approach:	https://www.doi.org/10.1016/j.jct.2016.07.020
McGowan Method:	http://link.springer.com/article/10.1007/BF02311772

Legend

chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
cps:	Solid phase 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
hfust:	Enthalpy of fusion at a given temperature
hsub:	Enthalpy of sublimation at standard conditions
hvap:	Enthalpy of vaporization at standard conditions
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
sfust:	Entropy of fusion at a given temperature
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume