DL-Dimethyl tartarate

Inchi: InChI=1S/C6H10O6/c1-11-5(9)3(7)4(8)6(10)12-2/h3-4,7-8H,1-2H3
InchiKey: PVRATXCXJDHJJN-UHFFFAOYSA-N
Formula: C6H10O6
SMILES: COC(=O)C(O)C(O)C(=O)OC
Mol. weight [g/mol]: 178.14
CAS: 608-69-5

Physical Properties

Property code	Value	Unit	Source
chs	-2590.28	kJ/mol	NIST Webbook
gf	-746.72	kJ/mol	Joback Method
hf	-971.79	kJ/mol	Joback Method
hfus	18.00	kJ/mol	Joback Method
hvap	79.84	kJ/mol	Joback Method
log10ws	1.19		Crippen Method
logp	-1.946		Crippen Method
mcvol	122.020	ml/mol	McGowan Method
pc	4432.62	kPa	Joback Method
tb	672.74	K	Joback Method
tc	851.56	K	Joback Method
tf	360.00 ± 1.00	K	NIST Webbook
vc	0.446	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	343.76	J/mol×K	762.15	Joback Method
cpg	361.42	J/mol×K	851.56	Joback Method
cpg	355.94	J/mol×K	821.76	Joback Method
cpg	350.05	J/mol×K	791.95	Joback Method
cpg	322.54	J/mol×K	672.74	Joback Method
cpg	330.00	J/mol×K	702.54	Joback Method
cpg	337.07	J/mol×K	732.35	Joback Method
dvisc	0.0000159	Pa×s	672.74	Joback Method

dvisc	0.0001172	Pa×s	533.04	Joback Method
dvisc	0.0000541	Pa×s	579.61	Joback Method
dvisc	0.0000280	Pa×s	626.17	Joback Method
dvisc	0.0035690	Pa×s	393.34	Joback Method
dvisc	0.0008981	Pa×s	439.91	Joback Method
dvisc	0.0002943	Pa×s	486.47	Joback Method
hfust	26.94	kJ/mol	360.20	NIST Webbook
hsubt	113.80	kJ/mol	336.50	NIST Webbook
hsubt	112.00 ± 5.60	kJ/mol	326.50	NIST Webbook
hvapt	62.50	kJ/mol	464.00	NIST Webbook

Sources

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l
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=C608695&Units=SI

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
hfust: Enthalpy of fusion at a given temperature
hsubt: Enthalpy of sublimation at a given temperature
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
tb: Normal Boiling Point Temperature
tc: Critical Temperature
tf: Normal melting (fusion) point

vc: Critical Volume