DL-Tartaric acid

Other names:	(.+/-.)-Tartaric acid
	(2RS,3RS)-Tartaric acid
	(±)-tartaric acid
	2,3-DIHYDROXY-BUTANEDIOIC ACID
	2,3-Dihydroxysuccinic acid, (DL)-
	2,3-dihydroxybutanedioic acid
	Butanedioic acid, 2,3-dihydroxy-(R*,R*)-(.+/-.)-
	Butanedioic acid, 2,3-dihydroxy-, (2R,3R)-rel-
	Butanedioic acid, 2,3-dihydroxy-, (R*,R*)-
	Dihydroxysuccinic acid, (DL)-
	NSC 148314
	Paratartaric acid
	Paratartaric aicd
	RACEMIC ACID
	Racemic tartaric acid
	Resolvable tartaric acid
	TARTARIC ACID
	Tartaric acid, (.+/-.)-
	Tartaric acid, (DL)-
	Traubensaure
	Uvic acid
	dl-2,3-dihydroxybutanedioic acid
Inchi:	InChI=1S/C4H6O6/c5-1(3(7)8)2(6)4(9)10/h1-2,5-6H,(H,7,8)(H,9,10)
InchiKey:	FEWJPZIEWOKRBE-UHFFFAOYSA-N
Formula:	C4H6O6
SMILES:	O=C(O)C(O)C(O)C(=O)O
Mol. weight [g/mol]:	150.09
CAS:	133-37-9

Physical Properties

Property code	Value	Unit	Source
chs	-1154.00	kJ/mol	NIST Webbook
chs	-1142.00 ± 0.30	kJ/mol	NIST Webbook
gf	-827.20	kJ/mol	Joback Method
hf	-970.53	kJ/mol	Joback Method
hfus	18.62	kJ/mol	Joback Method

hvap	103.93	kJ/mol	Joback Method
log10ws	1.55		Crippen Method
logp	-2.123		Crippen Method
mcvol	93.840	ml/mol	McGowan Method
pc	8386.00	kPa	Joback Method
tb	766.50	K	Joback Method
tc	945.33	K	Joback Method
tf	447.98	K	Joback Method
vc	0.336	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	254.68	J/mol×K	766.50	Joback Method
cpg	272.19	J/mol×K	915.52	Joback Method
cpg	269.18	J/mol×K	885.72	Joback Method
cpg	265.93	J/mol×K	855.91	Joback Method
cpg	262.44	J/mol×K	826.11	Joback Method
cpg	258.69	J/mol×K	796.30	Joback Method
cpg	274.96	J/mol×K	945.33	Joback Method
dvisc	0.0000007	Pa×s	766.50	Joback Method
dvisc	0.0000016	Pa×s	713.41	Joback Method
dvisc	0.0000040	Pa×s	660.33	Joback Method
dvisc	0.0000118	Pa×s	607.24	Joback Method
dvisc	0.0000424	Pa×s	554.15	Joback Method
dvisc	0.0002009	Pa×s	501.07	Joback Method
dvisc	0.0013755	Pa×s	447.98	Joback Method

Sources

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C133379&Units=SI

Crippen Method: http://pubs.acs.org/doi/abs/10.1021/ci990307l

Crippen Method: https://www.chemeo.com/doc/models/crippen_log10ws

Ultrasonic Velocity and Density Studies of Solutions of Maleic Acid and Tartaric Acid in Water at T = (298.15 and 308.15) K: https://www.doi.org/10.1007/s10765-010-0736-6

Experiment and correlation of osmotic coefficient for aqueous solution of carboxylic acids using NRTL nonrandom factor model: https://www.doi.org/10.1016/j.fluid.2012.05.002

Joback Method: https://en.wikipedia.org/wiki/Joback_method

KDB: https://www.cheric.org/research/kdb/hcprop/showprop.php?cmpid=978

McGowan Method: http://link.springer.com/article/10.1007/BF02311772

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
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