(R,R)-Tartaric acid

Other names:	(+)-(2R,3R)-Tartaric acid (+)-(R,R)-Tartaric acid (+)-L-Tartaric acid (+)-Tartaric acid (2R,3R)-(+)-Tartaric acid (2R,3R)-Tartaric acid (2S,3S)-(-)-tartaric acid (R,R)-(+)-Tartaric acid (S-[R*,R*])-2,3-dihydroxybutanedioic acid 1,2-Dihydroxyethane-1,2-dicarboxylic acid 2,3-Dihydroxybutanedioic acid 2,3-Dihydroxysuccinic acid, (2R,3R)- Butanedioic acid, 2,3-dihydroxy- Butanedioic acid, 2,3-dihydroxy- (2R,3R)- Butanedioic acid, 2,3-dihydroxy- [R-(R*,R*)]- D-tartaric acid D-threo-2,3-dihydroxysuccinic acid Dextrotartaric acid Kyselina 2,3-dihydroxybutandiova Kyselina vinna L-(+)-Tartaric acid L-Tartaric acid Malic acid, 3-hydroxy-, (L)- NSC 62778 Natural tartaric acid Succinic acid, 2,3-dihydroxy Tartaric Acid Tartaric acid, (L)- Tartaric acid, L-(+)- Threaric acid butanedioic acid, 2,3-dihydroxy-, (S-[R*.R*])- tartaric acid, D-
Inchi:	InChI=1S/C4H6O6/c5-1(3(7)8)2(6)4(9)10/h1-2,5-6H,(H,7,8)(H,9,10)/t1-,2-/m0/s1
InchiKey:	FEWJPZIEWOKRBE-LWMBPPNESA-N
Formula:	C4H6O6
SMILES:	O=C(O)C(O)C(O)C(=O)O
Mol. weight [g/mol]:	150.09
CAS:	87-69-4

Physical Properties

Property code	Value	Unit	Source
chs	-1159.30	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
rinpol	1249.00		NIST Webbook
rinpol	1249.00		NIST Webbook
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	258.69	J/mol×K	796.30	Joback Method
cpg	262.44	J/mol×K	826.11	Joback Method
cpg	265.93	J/mol×K	855.91	Joback Method
cpg	269.18	J/mol×K	885.72	Joback Method
cpg	272.19	J/mol×K	915.52	Joback Method
cpg	274.96	J/mol×K	945.33	Joback Method
cps	184.50	J/mol×K	323.00	NIST Webbook
dvisc	0.0013755	Pa×s	447.98	Joback Method
dvisc	0.0002009	Pa×s	501.07	Joback Method
dvisc	0.0000424	Pa×s	554.15	Joback Method
dvisc	0.0000118	Pa×s	607.24	Joback Method
dvisc	0.0000040	Pa×s	660.33	Joback Method
dvisc	0.0000016	Pa×s	713.41	Joback Method
dvisc	0.0000007	Pa×s	766.50	Joback Method
hfust	32.30	kJ/mol	445.10	NIST Webbook

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C87694&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Solid Liquid Equilibrium of d- and l-Tartaric Acid and Their Importance for Enantioseparation:	https://www.doi.org/10.1021/je300170y
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

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
hfus:	Enthalpy of fusion at standard conditions
hfust:	Enthalpy of fusion at a given temperature
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
rinpol:	Non-polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume