2-Propenoic acid, 2-methyl-, 2-hydroxypropyl ester

Other names: 1,2-Propanediol, 1-methacrylate
2-hydroxypropyl 2-methyl-2-propenoate
2-hydroxypropyl methacrylate
methacrylic acid, 2-hydroxypropyl ester
«beta»-Hydroxypropyl methacrylate

Inchi: InChI=1S/C7H12O3/c1-5(2)7(9)10-4-6(3)8/h6,8H,1,4H2,2-3H3

InchiKey: VHSHLMUCYSAUQU-UHFFFAOYSA-N

Formula: C7H12O3

SMILES: C=C(C)C(=O)OCC(C)O

Mol. weight [g/mol]: 144.17

CAS: 923-26-2

Physical Properties

Property code	Value	Unit	Source
gf	-285.83	kJ/mol	Joback Method
hf	-474.48	kJ/mol	Joback Method
hfus	14.65	kJ/mol	Joback Method
hvap	56.03	kJ/mol	Joback Method
log10ws	-0.84		Crippen Method
logp	0.486		Crippen Method
mcvol	118.500	ml/mol	McGowan Method
pc	3472.45	kPa	Joback Method
tb	524.15	K	Joback Method
tc	703.12	K	Joback Method
tf	270.91	K	Joback Method
vc	0.447	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	270.15	J/mol×K	524.15	Joback Method
cpg	279.73	J/mol×K	553.98	Joback Method
cpg	288.90	J/mol×K	583.81	Joback Method
cpg	297.68	J/mol×K	613.63	Joback Method

cpg	306.08	J/mol×K	643.46	Joback Method
cpg	314.09	J/mol×K	673.29	Joback Method
cpg	321.72	J/mol×K	703.12	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=C923262&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
High pressure phase behaviour of the binary mixture for the 2-hydroxyethyl methacrylate, 2-hydroxypropyl acrylate, and 2-hydroxypropyl methacrylate in supercritical carbon dioxide:	https://www.doi.org/10.1016/j.jct.2006.11.010
Joback Method:	https://en.wikipedia.org/wiki/Joback_method

Legend

cpg:	Ideal gas heat capacity
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