2-Hydroxyethyl methacrylate

Other names:	1,2-Ethanediol, mono(2-methyl)-2-propenoate-
	1,2-Ethanediol, mono(2-methyl)-2-propenyl
	2-(Methacryloyloxy)ethanol
	2-Methyl-2-propenoic acid, 2-hydroxyethyl ester
	2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester
	2-hydroxypropyl acrylate
	Bisomer HEMA
	Ethylene glycol methacrylate
	Ethylene glycol monomethacrylate
	GMA
	Glycol methacrylate
	Glycol monomethacrylate
	HEMA
	Hydroxyethyl methacrylate
	Methacrylic acid, 2-hydroxyethyl ester
	Mhoromer
	Monomer MG-1
	NSC 24180
	«beta»-Hydroxyethyl methacrylate
	Â«betaÂ»-Hydroxyethyl methacrylate
Inchi:	InChI=1S/C6H10O3/c1-5(2)6(8)9-4-3-7/h7H,1,3-4H2,2H3
InchiKey:	WOBHKFSMXKNTIM-UHFFFAOYSA-N
Formula:	C6H10O3
SMILES:	C=C(C)C(=O)OCCO
Mol. weight [g/mol]:	130.14
CAS:	868-77-9

Physical Properties

Property code	Value	Unit	Source
gf	-291.81	kJ/mol	Joback Method
hf	-448.56	kJ/mol	Joback Method
hfs	-627.60	kJ/mol	NIST Webbook
hfus	15.58	kJ/mol	Joback Method
hvap	54.19	kJ/mol	Joback Method
log10ws	-0.31		Crippen Method
logp	0.098		Crippen Method
mcvol	104.410	ml/mol	McGowan Method

pc	3862.67	kPa	Joback Method
tb	501.71	K	Joback Method
tc	678.78	K	Joback Method
tf	274.64	K	Joback Method
vc	0.397	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	227.70	J/mol×K	501.71	Joback Method
cpg	235.98	J/mol×K	531.22	Joback Method
cpg	243.94	J/mol×K	560.73	Joback Method
cpg	251.58	J/mol×K	590.25	Joback Method
cpg	258.89	J/mol×K	619.76	Joback Method
cpg	265.89	J/mol×K	649.27	Joback Method
cpg	272.58	J/mol×K	678.78	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	340.20	K	0.50	NIST Webbook

Sources

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

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

NIST Webbook: http://webbook.nist.gov/cgi/cbook.cgi?ID=C868779&Units=SI

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

Legend

cpg:	Ideal gas heat capacity
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
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
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume