2-Propenoic acid, ethenyl ester

Other names:	Acrylic acid, vinyl ester
	ethenyl 2-propenoate
	ethenyl acrylate
	vinyl 2-propenoate
	vinyl acrylate
Inchi:	InChI=1S/C5H6O2/c1-3-5(6)7-4-2/h3-4H,1-2H2
InchiKey:	BLCTWBJQROOONQ-UHFFFAOYSA-N
Formula:	C5H6O2
SMILES:	C=COC(=O)C=C
Mol. weight [g/mol]:	98.10
CAS:	2177-18-6

Physical Properties

Property code	Value	Unit	Source
gf	-67.02	kJ/mol	Joback Method
hf	-140.47	kJ/mol	Joback Method
hfus	8.93	kJ/mol	Joback Method
hvap	34.54	kJ/mol	Joback Method
log10ws	-0.98		Crippen Method
logp	0.859		Crippen Method
mcvol	80.150	ml/mol	McGowan Method
pc	4067.32	kPa	Joback Method
tb	383.45	K	Joback Method
tc	569.81	K	Joback Method
tf	191.20 ± 0.60	K	NIST Webbook
vc	0.301	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	135.44	J/mol×K	383.45	Joback Method
cpg	167.81	J/mol×K	538.75	Joback Method
cpg	161.87	J/mol×K	507.69	Joback Method
cpg	155.66	J/mol×K	476.63	Joback Method

cpg	149.19	J/mol×K	445.57	Joback Method
cpg	142.45	J/mol×K	414.51	Joback Method
cpg	173.50	J/mol×K	569.81	Joback Method
dvisc	0.0002597	Pa×s	383.45	Joback Method
dvisc	0.0003205	Pa×s	355.33	Joback Method
dvisc	0.0004100	Pa×s	327.22	Joback Method
dvisc	0.0005495	Pa×s	299.10	Joback Method
dvisc	0.0007826	Pa×s	270.98	Joback Method
dvisc	0.0012096	Pa×s	242.87	Joback Method
dvisc	0.0020954	Pa×s	214.75	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
Bubble-Point Measurement for CO2 + Vinyl Acetate and CO2 + Vinyl Acrylate systems at High Pressures.:	https://www.doi.org/10.1021/je0201121
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=C2177186&Units=SI

Legend

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

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