Acetic acid, methoxy-

Other names:	2-Methoxyacetic acid
	CH3OCH2COOH
	Methoxyacetic acid
	Methoxyethanoic acid
Inchi:	InChI=1S/C3H6O3/c1-6-2-3(4)5/h2H2,1H3,(H,4,5)
InchiKey:	RMIODHQZRUFFFF-UHFFFAOYSA-N
Formula:	C3H6O3
SMILES:	COCC(=O)O
Mol. weight [g/mol]:	90.08
CAS:	625-45-6

Physical Properties

Property code	Value	Unit	Source
gf	-396.36	kJ/mol	Joback Method
hf	-502.28	kJ/mol	Joback Method
hfus	10.40	kJ/mol	Joback Method
hvap	48.11	kJ/mol	Joback Method
log10ws	0.74		Crippen Method
logp	-0.283		Crippen Method
mcvol	66.440	ml/mol	McGowan Method
pc	5343.52	kPa	Joback Method
tb	476.70	K	NIST Webbook
tc	611.34	K	Joback Method
tf	256.55	K	Joback Method
vc	0.246	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	158.17	J/mol×K	611.34	Joback Method
cpg	129.32	J/mol×K	436.51	Joback Method
cpg	134.49	J/mol×K	465.65	Joback Method
cpg	139.52	J/mol×K	494.79	Joback Method
cpg	144.41	J/mol×K	523.92	Joback Method

cpg	149.15	J/mol×K	553.06	Joback Method
cpg	153.74	J/mol×K	582.20	Joback Method
dvisc	0.0002559	Pa×s	436.51	Joback Method
dvisc	0.0190072	Pa×s	256.55	Joback Method
dvisc	0.0063665	Pa×s	286.54	Joback Method
dvisc	0.0026236	Pa×s	316.54	Joback Method
dvisc	0.0012605	Pa×s	346.53	Joback Method
dvisc	0.0006806	Pa×s	376.52	Joback Method
dvisc	0.0004025	Pa×s	406.52	Joback Method
hvapt	54.50	kJ/mol	401.00	NIST Webbook

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	369.20	K	1.70	NIST Webbook

Correlations

Information	Value
Property code	pvap
Equation	ln(Pvp) = A + B/(T + C)
Coeff. A	1.57677e+01
Coeff. B	-4.30386e+03
Coeff. C	-9.06830e+01
Temperature range (K), min.	368.71
Temperature range (K), max.	504.35

Sources

Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws
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=C625456&Units=SI
The Yaws Handbook of Vapor Pressure:	https://www.sciencedirect.com/book/9780128029992/the-yaws-handbook-of-vapor-pressure
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
hvapt:	Enthalpy of vaporization at a given temperature
log10ws:	Log10 of Water solubility in mol/l
logp:	Octanol/Water partition coefficient
mcvol:	McGowan's characteristic volume
pc:	Critical Pressure
pvap:	Vapor pressure
tb:	Normal Boiling Point Temperature
tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume