

Acetic acid, anhydride with formic acid

Other names:	Acetic formic anhydride
Inchi:	InChI=1S/C3H4O3/c1-3(5)6-2-4/h2H,1H3
InchiKey:	ORWKVZNEPHTCQE-UHFFFAOYSA-N
Formula:	C3H4O3
SMILES:	CC(=O)OC=O
Mol. weight [g/mol]:	88.06
CAS:	2258-42-6

Physical Properties

Property code	Value	Unit	Source
gf	-359.06	kJ/mol	Joback Method
hf	-435.63	kJ/mol	Joback Method
hfus	8.60	kJ/mol	Joback Method
hvap	38.15	kJ/mol	Joback Method
log10ws	0.28		Crippen Method
logp	-0.294		Crippen Method
mcvol	62.140	ml/mol	McGowan Method
pc	5205.63	kPa	Joback Method
ripol	1436.00		NIST Webbook
ripol	1436.00		NIST Webbook
tb	392.99	K	Joback Method
tc	581.64	K	Joback Method
tf	237.73	K	Joback Method
vc	0.244	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	109.13	J/mol×K	392.99	Joback Method
cpg	113.82	J/mol×K	424.43	Joback Method
cpg	118.40	J/mol×K	455.87	Joback Method
cpg	122.86	J/mol×K	487.32	Joback Method
cpg	127.20	J/mol×K	518.76	Joback Method
cpg	131.40	J/mol×K	550.20	Joback Method

cpg	135.46	J/mol×K	581.64	Joback Method
dvisc	0.0023853	Pa×s	237.73	Joback Method
dvisc	0.0014812	Pa×s	263.61	Joback Method
dvisc	0.0010016	Pa×s	289.48	Joback Method
dvisc	0.0007222	Pa×s	315.36	Joback Method
dvisc	0.0005472	Pa×s	341.24	Joback Method
dvisc	0.0004312	Pa×s	367.11	Joback Method
dvisc	0.0003506	Pa×s	392.99	Joback Method

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
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=C2258426&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
ripol:	Polar retention indices
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume

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