

Acetic acid, oxo-

Other names:	Glyoxylic acid «alpha»-Ketoacetic acid Formic acid, formyl- Formylformic acid Glyoxalic acid Oxalaldehydic acid Oxoacetic acid Oxoethanoic acid OCHCOOH Kyselina glyoxylova Acetic acid, 2-oxo- NSC 27785
Inchi:	InChI=1S/C2H2O3/c3-1-2(4)5/h1H,(H,4,5)
InchiKey:	HHLFWLYXYJOTON-UHFFFAOYSA-N
Formula:	C2H2O3
SMILES:	O=CC(=O)O
Mol. weight [g/mol]:	74.04
CAS:	298-12-4

Physical Properties

Property code	Value	Unit	Source
gf	-399.30	kJ/mol	Joback Method
hf	-435.00	kJ/mol	Joback Method
hfus	8.91	kJ/mol	Joback Method
hvap	50.19	kJ/mol	Joback Method
log10ws	0.96		Crippen Method
logp	-0.730		Crippen Method
mcvol	48.050	ml/mol	McGowan Method
pc	7169.69	kPa	Joback Method
tb	439.87	K	Joback Method
tc	622.82	K	Joback Method
tf	265.05	K	Joback Method
vc	0.190	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	85.39	J/molxK	439.87	Joback Method
cpg	99.23	J/molxK	592.33	Joback Method
cpg	96.73	J/molxK	561.84	Joback Method
cpg	94.10	J/molxK	531.35	Joback Method
cpg	91.33	J/molxK	500.85	Joback Method
cpg	88.43	J/molxK	470.36	Joback Method
cpg	101.60	J/molxK	622.82	Joback Method
dvisc	0.0003434	Paxs	439.87	Joback Method
dvisc	0.0005271	Paxs	410.73	Joback Method
dvisc	0.0008638	Paxs	381.60	Joback Method
dvisc	0.0015361	Paxs	352.46	Joback Method
dvisc	0.0030301	Paxs	323.32	Joback Method
dvisc	0.0068384	Paxs	294.19	Joback Method
dvisc	0.0184573	Paxs	265.05	Joback Method

Sources

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=C298124&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
Crippen Method:	https://www.chemeo.com/doc/models/crippen_log10ws

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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