

Ethylene oxalate

Inchi:	InChI=1S/C4H4O4/c5-3-4(6)8-2-1-7-3/h1-2H2
InchiKey:	ZNLAHAOCFKBYRH-UHFFFAOYSA-N
Formula:	C4H4O4
SMILES:	O=C1OCCOC1=O
Mol. weight [g/mol]:	116.07
CAS:	3524-70-7

Physical Properties

Property code	Value	Unit	Source
chs	-1448.50 ± 1.20	kJ/mol	NIST Webbook
gf	-402.46	kJ/mol	Joback Method
hf	-590.63	kJ/mol	Joback Method
hfs	-697.00 ± 1.20	kJ/mol	NIST Webbook
hfus	11.86	kJ/mol	Joback Method
hvap	42.75	kJ/mol	Joback Method
log10ws	0.88		Crippen Method
logp	-0.914		Crippen Method
mcvol	71.240	ml/mol	McGowan Method
pc	5809.41	kPa	Joback Method
ss	149.70	J/mol×K	NIST Webbook
ss	158.40	J/mol×K	NIST Webbook
tb	504.68	K	Joback Method
tc	755.81	K	Joback Method
tf	336.04	K	Joback Method
tt	415.00 ± 1.00	K	NIST Webbook
vc	0.249	m ³ /kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	203.75	J/mol×K	713.96	Joback Method
cpg	156.52	J/mol×K	504.68	Joback Method
cpg	166.76	J/mol×K	546.54	Joback Method
cpg	176.68	J/mol×K	588.39	Joback Method

cpg	186.20	J/mol×K	630.25	Joback Method
cpg	195.24	J/mol×K	672.10	Joback Method
cpg	211.63	J/mol×K	755.81	Joback Method
cps	141.90	J/mol×K	298.15	NIST Webbook
cps	141.90	J/mol×K	298.15	NIST Webbook
hfust	13.40	kJ/mol	415.00	NIST Webbook
hfust	13.40	kJ/mol	415.00	NIST Webbook
sfust	32.29	J/mol×K	415.00	NIST Webbook

Sources

Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci9903071
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=C3524707&Units=SI

Legend

chs:	Standard solid enthalpy of combustion
cpg:	Ideal gas heat capacity
cps:	Solid phase 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
hfust:	Enthalpy of fusion at a given temperature
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
sfust:	Entropy of fusion at a given temperature
ss:	Solid phase molar entropy at standard conditions
tb:	Normal Boiling Point Temperature
tc:	Critical Temperature
tf:	Normal melting (fusion) point
tt:	Triple Point Temperature

vc: Critical Volume

Latest version available from:

<https://www.chemeo.com/cid/87-972-7/Ethylene-oxalate.pdf>

Generated by Cheméo on 2024-04-23 06:24:15.339720583 +0000 UTC m=+16142704.260297905.

Cheméo (<https://www.chemeo.com>) is the biggest free database of chemical and physical data for the process industry.