(2E)-2-butenedioic acid

Inchi: InChI=1S/C4H4O4/c5-3(6)1-2-4(7)8/h1-2H,(H,5,6)(H,7,8)/b2-1+
InchiKey: VZCYOOQTPOCHFL-OWOJBTEDSA-N
Formula: C4H4O4
SMILES: O=C(O)C=CC(=O)O
Mol. weight [g/mol]: 116.07

Physical Properties

Property code	Value	Unit	Source
gf	-468.46	kJ/mol	Joback Method
hf	-538.29	kJ/mol	Joback Method
hfus	17.69	kJ/mol	Joback Method
hvap	71.31	kJ/mol	Joback Method
log10ws	0.45		Crippen Method
logp	-0.288		Crippen Method
mcvol	77.800	ml/mol	McGowan Method
pc	6503.64	kPa	Joback Method
tb	587.18	K	Joback Method
tc	769.82	K	Joback Method
tf	351.26	K	Joback Method
vc	0.289	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	168.01	J/mol×K	587.18	Joback Method
cpg	172.46	J/mol×K	617.62	Joback Method
cpg	176.64	J/mol×K	648.06	Joback Method
cpg	180.57	J/mol×K	678.50	Joback Method
cpg	184.27	J/mol×K	708.94	Joback Method
cpg	187.74	J/mol×K	739.38	Joback Method
cpg	191.01	J/mol×K	769.82	Joback Method
dvisc	0.0094225	Pa×s	351.26	Joback Method
dvisc	0.0025249	Pa×s	390.58	Joback Method
dvisc	0.0008609	Pa×s	429.90	Joback Method

dvisc	0.0003515	Pa×s	469.22	Joback Method
dvisc	0.0001649	Pa×s	508.54	Joback Method
dvisc	0.0000862	Pa×s	547.86	Joback Method
dvisc	0.0000492	Pa×s	587.18	Joback Method

Sources

McGowan Method:	http://link.springer.com/article/10.1007/BF02311772
NIST Webbook:	http://webbook.nist.gov/cgi/cbook.cgi?ID=B6001278&Units=SI
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

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