trans-1,2-Cyclopropanedicarboxylic acid

Other names: 1,2-Cyclopropanedicarboxylic acid, trans-
1,2-Cyclopropanedicarboxylic acid, (E)-
Inchi: InChI=1S/C5H6O4/c6-4(7)2-1-3(2)5(8)9/h2-3H,1H2,(H,6,7)(H,8,9)/t2-,3-/m1/s1
InchiKey: RLWFMZKPPHHHCB-PWNYCUMCSA-N
Formula: C5H6O4
SMILES: O=C(O)C1CC1C(=O)O
Mol. weight [g/mol]: 130.10
CAS: 696-75-3

Physical Properties

Property code	Value	Unit	Source
gf	-487.22	kJ/mol	Joback Method
hf	-623.69	kJ/mol	Joback Method
hfus	19.29	kJ/mol	Joback Method
hvap	73.18	kJ/mol	Joback Method
log10ws	0.48		Crippen Method
logp	-0.208		Crippen Method
mcvol	85.330	ml/mol	McGowan Method
pc	5999.95	kPa	Joback Method
tb	607.97	K	Joback Method
tc	793.00	K	Joback Method
tf	381.31	K	Joback Method
vc	0.322	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	219.23	J/mol×K	607.97	Joback Method
cpg	225.77	J/mol×K	638.81	Joback Method
cpg	231.92	J/mol×K	669.65	Joback Method
cpg	237.71	J/mol×K	700.48	Joback Method
cpg	243.14	J/mol×K	731.32	Joback Method
cpg	248.26	J/mol×K	762.16	Joback Method
cpg	253.06	J/mol×K	793.00	Joback Method

dvisc	0.0061790	Pa×s	381.31	Joback Method
dvisc	0.0024292	Pa×s	419.09	Joback Method
dvisc	0.0011145	Pa×s	456.86	Joback Method
dvisc	0.0005759	Pa×s	494.64	Joback Method
dvisc	0.0003268	Pa×s	532.42	Joback Method
dvisc	0.0001999	Pa×s	570.19	Joback Method
dvisc	0.0001300	Pa×s	607.97	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=C696753&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l
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