Bicyclo(2.2.1)heptane-2-carboxylic acid

Other names:	2-Norbornanecarboxylic acid
	endo-Bicyclo(2.2.1)heptane-2-carboxylic acid
	Bicyclo(2,2,1)heptane-2-carboxylic acid
Inchi:	InChI=1S/C8H12O2/c9-8(10)7-4-5-1-2-6(7)3-5/h5-7H,1-4H2,(H,9,10)
InchiKey:	JESWDXIHOJGWBP-UHFFFAOYSA-N
Formula:	C8H12O2
SMILES:	O=C(O)C1CC2CCC1C2
Mol. weight [g/mol]:	140.18
CAS:	824-62-4

Physical Properties

Property code	Value	Unit	Source
gf	-147.57	kJ/mol	Joback Method
hf	-354.16	kJ/mol	Joback Method
hfus	17.40	kJ/mol	Joback Method
hvap	56.52	kJ/mol	Joback Method
log10ws	-1.33		Crippen Method
logp	1.507		Crippen Method
mcvol	109.300	ml/mol	McGowan Method
pc	4010.84	kPa	Joback Method
tb	541.57	K	Joback Method
tc	741.38	K	Joback Method
tf	318.79	K	Joback Method
vc	0.413	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	281.77	J/mol×K	541.57	Joback Method
cpg	339.89	J/mol×K	708.08	Joback Method
cpg	329.72	J/mol×K	674.78	Joback Method
cpg	318.88	J/mol×K	641.48	Joback Method
cpg	307.30	J/mol×K	608.17	Joback Method
cpg	294.95	J/mol×K	574.87	Joback Method

cpg	349.43	J/mol×K	741.38	Joback Method
dvisc	0.0005645	Pa×s	541.57	Joback Method
dvisc	0.0007372	Pa×s	504.44	Joback Method
dvisc	0.0010044	Pa×s	467.31	Joback Method
dvisc	0.0014435	Pa×s	430.18	Joback Method
dvisc	0.0022216	Pa×s	393.05	Joback Method
dvisc	0.0037411	Pa×s	355.92	Joback Method
dvisc	0.0071130	Pa×s	318.79	Joback Method

Pressure Dependent Properties

Property code	Value	Unit	Pressure [kPa]	Source
tbrp	407.50 ± 0.50	K	2.10	NIST Webbook

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=C824624&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
tb: Normal Boiling Point Temperature

tbrp:	Boiling point at reduced pressure
tc:	Critical Temperature
tf:	Normal melting (fusion) point
vc:	Critical Volume