1(7)-Bicyclo[5.3.0]decane

Inchi: InChI=1S/C10H16/c1-2-5-9-7-4-8-10(9)6-3-1/h1-8H2
InchiKey: ZQLAQUUTBNRDBN-UHFFFAOYSA-N
Formula: C10H16
SMILES: C1CCC2=C(CC1)CCC2
Mol. weight [g/mol]: 136.23
CAS: 7125-60-2

Physical Properties

Property code	Value	Unit	Source
gf	132.54	kJ/mol	Joback Method
hf	-53.25	kJ/mol	Joback Method
hfus	7.83	kJ/mol	Joback Method
hvap	40.60	kJ/mol	Joback Method
ie	8.25 ± 0.02	eV	NIST Webbook
log10ws	-3.65		Crippen Method
logp	3.431		Crippen Method
mcvol	125.740	ml/mol	McGowan Method
pc	3280.28	kPa	Joback Method
tb	477.22	K	Joback Method
tc	704.90	K	Joback Method
tf	258.54	K	Joback Method
vc	0.466	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	273.16	J/mol×K	477.22	Joback Method
cpg	357.67	J/mol×K	666.95	Joback Method
cpg	343.01	J/mol×K	629.01	Joback Method
cpg	327.29	J/mol×K	591.06	Joback Method
cpg	310.45	J/mol×K	553.11	Joback Method
cpg	292.43	J/mol×K	515.17	Joback Method
cpg	371.35	J/mol×K	704.90	Joback Method
dvisc	0.0003440	Pa×s	477.22	Joback Method

dvisc	0.0004363	Pa×s	440.77	Joback Method
dvisc	0.0005774	Pa×s	404.33	Joback Method
dvisc	0.0008080	Pa×s	367.88	Joback Method
dvisc	0.0012172	Pa×s	331.43	Joback Method
dvisc	0.0020292	Pa×s	294.99	Joback Method
dvisc	0.0039070	Pa×s	258.54	Joback Method

Sources

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=C7125602&Units=SI
Crippen Method:	http://pubs.acs.org/doi/abs/10.1021/ci990307l

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
ie:	Ionization energy
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