7,8-Dioxabicyclo[4.2.2]dec-9-ene

Other names: 7,8-Dioxabicyclo(4,2,2)dec-9-ene
Inchi: InChI=1S/C8H12O2/c1-2-4-8-6-5-7(3-1)9-10-8/h5-8H,1-4H2
InchiKey: MNEHGPASSFGNGC-UHFFFAOYSA-N
Formula: C8H12O2
SMILES: C1=CC2CCCCC1OO2
Mol. weight [g/mol]: 140.18
CAS: 52148-56-8

Physical Properties

Property code	Value	Unit	Source
gf	-52.70	kJ/mol	Joback Method
hf	-293.71	kJ/mol	Joback Method
hfus	21.53	kJ/mol	Joback Method
hvap	43.23	kJ/mol	Joback Method
ie	9.00	eV	NIST Webbook
log10ws	-2.20		Crippen Method
logp	1.816		Crippen Method
mcvol	109.300	ml/mol	McGowan Method
pc	3867.48	kPa	Joback Method
tb	466.06	K	Joback Method
tc	694.78	K	Joback Method
tf	255.62	K	Joback Method
vc	0.394	m3/kmol	Joback Method

Temperature Dependent Properties

Property code	Value	Unit	Temperature [K]	Source
cpg	246.17	J/mol×K	466.06	Joback Method
cpg	263.86	J/mol×K	504.18	Joback Method
cpg	280.38	J/mol×K	542.30	Joback Method
cpg	295.80	J/mol×K	580.42	Joback Method
cpg	310.15	J/mol×K	618.54	Joback Method
cpg	323.50	J/mol×K	656.66	Joback Method
cpg	335.88	J/mol×K	694.78	Joback Method

dvisc	0.0045419	Pa×s	255.62	Joback Method
dvisc	0.0025254	Pa×s	290.69	Joback Method
dvisc	0.0015934	Pa×s	325.77	Joback Method
dvisc	0.0010995	Pa×s	360.84	Joback Method
dvisc	0.0008102	Pa×s	395.91	Joback Method
dvisc	0.0006275	Pa×s	430.99	Joback Method
dvisc	0.0005050	Pa×s	466.06	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=C52148568&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